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REPORT

OF THE

COMMISSIONER OF PATENTS

FOR THE YEAR 1853.

PART I.

ARTS AND MANUFACTURES

Smithsonian
Institution
WASHINGTON

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PART I.

PART I.

REPORT

OF THE

COMMISSIONER OF PATENTS.

UNITED STATES PATENT OFFICE, *January*, 1854.

SIR: Agreeably to the 14th section of the act approved 3d March, 1837, entitled "An act in addition to the act to promote the progress of science and useful arts," I have the honor to submit herewith my annual report.

The following statement will show the receipts and expenditures of the Office during the past year:

No. 1.

Statement of moneys received at the Patent Office during the year 1853.

Received on applications for patents, reissues, additional improvements, and extensions, and on caveats, disclaimers, and appeals	$110,565 00
Received for copies and for recording assignments	10,939 70
Received from sale of old iron	22 75
Total receipts	$121,527 45

No. 2.

Statement of expenditures from the Patent Fund during the year 1853.

For salaries	$44,826 77
For compensation of librarian	1,200 00
For temporary clerks	23,205 73
For books for the library	3,295 28

For contingent expenses, viz.:			
For ordinary expenses	$17,590 57		
For furnishing rooms in the new building, painting the old, and making cases for rejected models, &c.	11,923 35		
		29,513	92
For agricultural statistics and purchase of seeds . . .		7,086	49
For payments to judges in appeal cases		50	00
For refunding money on withdrawals . . .	23,466 64		
For refunding money paid in by mistake .	225 00		
		23,691	64
		$132,869	83
Making an excess of expenditures over receipts during the year of		$11,342	38

No. 3.

Statement of the Patent Fund.

Amount to the credit of the Patent Fund Jan. 1st, 1853,	$40,292	38
Deduct from this:		
The excess of expenditures during the year 1853, viz. .	11,342	38
Leaving in the treasury, 1st January, 1854 . . .	$28,950	00

In addition to the amount already paid for fitting up the rooms in the new building, there are several bills outstanding, amounting to about $3,500, which will diminish by that amount the sum above reported as being still in the treasury.

A contract has also been made to pay $10,800 for the iron frames for the lower tier of cases necessary to be placed in the large hall in the east wing of the Patent Office. The finishing of those cases, and procuring an equal number of cases of wood for the upper tier, and other necessary fixtures for that hall, are estimated to swell this last-mentioned sum to $30,000, which would more than absorb the entire amount in the treasury to the credit of the Patent Fund.

There are, besides, at least 2300 applications which have been rejected by the Office, in which the amounts liable to be withdrawn have not yet been demanded. In each of these the applicant is entitled to withdraw two-thirds of the fee paid by him, making at least $46,000 of additional liability subject to be called for at any time.

From the above statement it will be seen that the Office has already incurred liabilities which it is unable to meet. A justification for the course pursued will, it is hoped, be found in the great necessity of the case.

Congress had made no provision for these expenses. The convenience of all those connected with the Patent Office required the furniture which has been procured; and the condition of the models, which are to occupy the large hall in the east wing, imperatively demand that this hall should be fitted for their reception at the earliest day practicable. Had the matter been postponed till Congress should

make the necessary appropriation, much time might elapse before the bill for that purpose would become a law. Sixty days notice must then have been given before a contract could be made, and several months more for the contractors to complete the works, so that the hall might not be ready to be occupied for a year to come. Under these circumstances, it was thought expedient to take the responsibility of contracting to pay these expenses from the Patent Fund, and trust to Congress to refund the amount so far as it should be found necessary. Should these reasons be deemed sufficient to justify the course pursued, it is respectfully suggested that immediate measures be taken to refund the amount paid by the Patent Office for furniture, to meet the amount that will be due when the iron cases are delivered, and also to furnish the means for immediately providing the other furniture for the large hall. This will be ready in a few weeks for the reception of the cases. The iron cases are to be here by the first day of February next, and the other fixtures can also be soon completed, if contracts for that purpose be made at once. If all this is done, the Patent Office will have a little over $40,000 in its treasury, which, considering the liability for withdrawals above stated, is not much more than should be found there.

Appended hereto will be found a list of all the patents that have been granted during the year, together with an alphabetical list of the patentees, with their places of residence; also, a list of all the patents which, during the same period, have become public property.

The whole number of patents issued during the year is 958, including 24 reissues, 3 additional improvements, 12 extensions, and 75 designs.

The whole number which have expired is 375.

The number of applications made, and the number of patents issued, in each of the last thirteen years, are as follows:

Table exhibiting the business of the Office for thirteen years, ending December 31st, 1853.

Years.	Applications filed.	Caveats filed.	Patents issued.	Cash received.	Cash expended.
1841	847	312	495	$40,413 01	$23,065 87
1842	761	291	517	36,505 68	31,241 48
1843	819	315	531	35,315 81	30,776 96
1844	1045	380	502	42,509 26	36,344 73
1845	1246	452	502	51,076 14	39,395 65
1846	1272	448	619	50,264 16	46,158 71
1847	1531	533	572	63,111 19	41,878 35
1848	1628	607	660	67,576 69	58,905 84
1849	1955	595	1076	80,752 78	77,716 44
1850	2193	602	995	86,927 05	80,100 95
1851	2258	760	869	95,738 61	86,916 93
1852	2639	996	1020	112,056 34	95,916 91
1853	2673	901	958	121,527 45	132,869 83

From this it will be seen that although the receipts of the Office have been $9,471 11 greater than during the year previous, the expendi-

tures have increased in a much greater proportion, exceeding the whole income by $11,341 38. If the amount of $11,923 35, which has been paid for furniture, as above stated, were to be refunded, it would bring the expenditures slightly below the receipts. The excess of receipts over expenditures would have been about the same as usual but for two circumstances. *First*, an undue proportion of the amount expended for agricultural purposes stands charged to the last year's account, in consequence of those expenses being paid from parts of two separate appropriations. Our fiscal year begins on the first of January instead of the first of July, and it has so happened that most of the payments have been crowded into the closing portion of the last fiscal year, and into the first six months of this. *Secondly*, the number and compensation of the clerks in this Office have been considerably increased, mainly in consequence of the act of the last session of Congress, classifying the clerks in the different departments.

The large accumulation of the Patent Office fund occurred principally prior to the establishment of the system of examinations. On the first of January, 1837, it amounted to upwards of $300,000. Since that time the average amount of receipts over expenditures has not exceeded $10,000 per annum.

The labor and expense of making examinations is every year increasing as the field for examinations is constantly and rapidly widening. The Office is not justified in allowing a patent to issue until fully satisfied, as far as it has the means of becoming so, that the same invention has not been patented in this or any foreign country, nor been described in any printed publication, nor even been *discovered in the United States.* The models and portfolios of the Patent Office, and all printed publications in the library are, therefore, to be constantly examined, and, as these rapidly increase, the labor is augmented somewhat in the same proportion.

To give some idea of the amount of this labor, and of the rapidity of its increase, it may be stated that there are now in the Office very nearly 25,000 models, and about the same number of drawings in the portfolios. The number received within the last nine years is a little upwards of 17,000, and the number filed within the past year nearly 3,000.

The number of volumes in our library at this time is about 5,750: in 1847 it was only 1,850. There have been 1,550 added during the past year; most of these are works which require to be frequently referred to by the examiners in the course of the year.

From these facts it can be understood how the labor of examination is constantly increasing, and how the examinations of applications which once required but one examiner can now be scarcely performed by eighteen. The preceding table shows also that the number of Patents issued during the past year is considerably less than during the year previous. This is principally to be attributed to the fact that the changes and vacancies which occurred near the close of 1852 and in the early part of 1853, as well in the office of commissioner as in those of some of the examiners, left the Office less efficient than it would otherwise have been.

The following table shows that the number of Patents issued during

the last six months of the year is 583, against 375 issued during the first six months. With the present force, and their constantly increasing experience, it will be practicable to issue 1,200 Patents during the ensuing year.

The whole number of Patents issued during each month of the past year is as follows:

In the month of	January,	59	
"	" February,	39	
"	" March,	49	
"	" April,	68	
"	" May,	79	
"	" June,	81	=375
"	" July,	79	
"	" August,	100	
"	" September,	82	
"	" October,	124	
"	" November,	126	
"	" December,	72	=583
Total,			958

The number ot cases on hand and undisposed of on the last day of each month in the year is as follows:

January,	544	July,	948
February,	692	August,	900
March,	782	September,	757
April,	859	October,	675
May,	945	November,	614
June,	1028	December,	582

These arrearages had augmented from 155 on the first of January, 1852, to 481 on the first of January, 1853. It will be seen that they constantly and rapidly continued to increase till the first of July, since which time they have been gradually diminishing.

On that day the act of the last session of Congress took effect, which gave the Patent Office eight clerks of the second class. As their duties are not prescribed by law, it was deemed expedient to detail one of their number to act as a second assistant examiner, in each of the six examiners' rooms. The experiment has fully answered the purpose intended, and will require to be made permanent. Even that augmentation of force will not be sufficient to keep the business of the Office in that state of forwardness which the wants of the country require, and additional arrangements should be made, if it is intended that applications shall be acted upon promptly as soon as made.

One of the objects sought to be accomplished by the appointment of this additional force, is to have a number of suitable persons in training, and ready to fill any vacancies in the corps of examiners

proper, that may at any time occur. These vacancies not unfrequently result from resignations, caused by the fact that a person well qualified for an examiner finds a more profitable employment elsewhere than in the Patent Office. One remedy for this would be to increase the compensation of the examiners: another, to prepare for filling the vacancies when they occur. The latter of these has been to some extent resorted to; the former, if deemed desirable, will require the further action of Congress.

The Patent Office should command the highest order of talent. There is no person, whatever be his abilities or his attainments, who would not find, as an examiner, full exercise for all his talents. A practical sound sense is nowhere more important. All learning connected with the arts and sciences finds here an ample field for exercise; and even questions of law, that tax to their utmost the abilities of the most learned jurists, frequently present themselves for the decision of the Office, and should be rightfully decided by the examiner.

The compensation of the lowest class of examiners should be such as to command abilities that, with proper training, would grace the highest; and the compensation of all should be sufficient to induce each one in this employment to content himself with making it a business for life, as the information he is daily acquiring is constantly increasing his usefulness.

From the fact that the Office during the last six months has been constantly gaining upon the work before it, there may be thought no necessity for an augmentation of its force. But the exertions of the past six months have rather overtasked some of the examiners; and as the number of applications is annually increasing, it will be very difficult to overcome the heavy arrearage still standing against us. When that is effected, much of the force of the Office might be very advantageously employed in digesting and indexing the books of reference belonging to the Office.

From the present number and rapid increase of our models, drawings, and books of reference as above shown, it is evident that the only way of preventing the Office from being overwhelmed with its increasing labors, is by systematizing and arranging every thing.

The increased space, of which we have an early promise, will enable us to do this with regard to the models and drawings; but with regard to the books of reference the case is more difficult. Many of these are wholly without indices. In other cases works containing from fifty to a hundred volumes have only a separate index to each volume. A reasonable amount of time appropriated to consolidating these indices, and to digesting and arranging the works in the library, would be undoubted economy; and by promptly reducing all new works to the same system of order and arrangement, augmentation will not tend to produce confusion, or even sensibly to increase the labor of examination.

Any increase of force will absolutely require increase of room for its accommodation. But for this difficulty a further number would before this time have been detailed on this duty, sufficient to have disposed of the greater portion of the present amount of arrearages, so that an application could have been acted upon within a few days af-

ter it was filed. The inability to do this is one of the greatest grievances of which inventors have to complain, and should be soon removed.

In fact, the present accommodations are altogether insufficient for the present force: one set of examiners, consisting of the principal and his two assistants, have to occupy a single room. Applicants and their agents must constantly have more or less intercourse with these examiners: the models of cases under examination are thus to some extent exposed to the observation of those who may make an improper use of such an opportunity. There should be the means of preserving greater secrecy than is now possible. Each set of examiners should be provided with two rooms, into one of which, containing the models of cases under examination, no one except a sworn officer should ever be permitted to enter.

The limited space assigned to the models in the Office has long occasioned serious inconvenience, and been the cause of just complaint by inventors. The crowded condition of those models not only prevents a proper arrangement, but necessarily exposes them to constant danger of injury and destruction. A large portion of them are consequently in a crippled condition, very discreditable to the Office, and detracting much from its usefulness.

So far as the patented models are concerned, this difficulty will be remedied as soon as the large hall in the east wing is ready for their reception. The space they now occupy will be barely sufficient, when divided into suitable rooms, for the proper accommodation of the library, the examiners, and the machinist.

The large number of models belonging to rejected applications would therefore still be left in their present condition, which is constantly growing worse as their number continues to augment. The law requires these to be arranged and preserved in the same manner as those of patented inventions. If a discrimination were allowed, some of these, being mere duplicates of other models, or representing contrivances wholly unpatentable, might be dispensed with, which would partially relieve their present crowded condition. But a considerable proportion of these rejected models are almost as useful as those of patented inventions. They show the different shapes in which, what the Office would regard as the same invention substantially, may present itself, and often furnish a far more satisfactory reference on which to reject a new application than could be otherwise obtained. For these reasons those models should, if possible, be brought from their present dark and incommodious recesses in the basement, and exposed to the clear light of the upper day, suitably arranged for convenient and ready examination.

There seems no other practicable way of effecting this object than to get possession of the large hall, now principally occupied by curiosities brought home by our exploring expeditions. These curiosities have no natural connection with the Patent Office, and would find a much more appropriate resting place within the walls of the Smithsonian Institution. There is plenty of room within that building for their reception and proper arrangement; and the only obstacle in the way is the expense attendant upon the care and custody of these vari-

ous articles, which those who have the management of that institution do not feel authorized to defray out of its limited income specially appropriated to other purposes. A small annual appropriation for this purpose by Congress would remove the difficulty that now prevents the restoration of this large hall to the use for which it was designed. It is respectfully submitted whether the dictates of sound policy, and even simple justice, do not require this small expenditure, in order that room should be provided in the Patent Office for the full exhibition and complete arrangement of all our models. If this were done, not only could all our models be properly disposed of, but specimens of fabrics and other manufactures and works of art, might be classified and arranged in the manner which the law now requires, but which requirement absolute necessity has always compelled the Office to disregard.

The rate of fees required to be paid into the Office needs a thorough revision. Perhaps they will require to be somewhat augmented; since, while the salaries and the number of persons in the Office have been all the while increasing, the fees have remained unchanged.

But an augmentation in amount is not so important as changes in other respects. It is believed that a tariff might be adopted which would be quite as acceptable to the inventors as the present, and at the same time bring a much greater income into the Office. If, for instance, the whole system of withdrawals were at once abolished, so that the inventors could keep their money in their own pockets until it was required to be paid, and when once paid it were never to be withdrawn, the fees might be even less than they are at present, and at the same time the available amount paid into the treasury would be greater.

Such an arrangement would be much more convenient for the Office, saving some labor, and the transmission of a considerable amount of money from the Office back to the unsuccessful applicant, and enabling us to know at any time the exact condition of our reliable finances, instead of having, as at present, near $50,000 lying idle in the treasury without a known owner. That money might have been much more usefully employed at home until it was wanted here.

Another change connected with this subject which seems to be imperatively called for, relates to the fee required of foreigners. That fee seems to the undersigned enormous and indefensible upon any principle of justice or sound policy. If a Patent is to be regarded as a downright gratuity conferred by the Government on the inventor, simple equity dictates that we should not impose more onerous conditions on the subjects of other governments than those governments exact from our own citizens. The stern rule of retaliation would ask for nothing more than such reciprocity.

Within the last two years Great Britain has greatly diminished her former high rates of Patent fees. It is believed that in no country in Europe are our citizens taxed for these purposes as severely as we now tax theirs. It is well known that some European governments impose a lower rate of fees on an American citizen than he would be required to pay by this Office; and yet we continue to charge a British subject $500, and any other alien $300, for that which we grant to our own citizens for $30.

But the granting of a Patent is not a mere gratuity by the Govern-

ment: it is the recognition of an evident right in the inventor. No title to property can be more just or valid than his who has created that property. The rule of natural justice is the same in this respect whether the inventor be a citizen or an alien. It is right that the Government should charge the patentee with the expense of securing him in his title to what was before rightfully his own; but it is questionable whether a revenue should be sought from this source except in cases of great necessity. Is there any sufficient reason why the general rule should be departed from in the case of an alien?

It may seem reasonable that we should charge an alien the same fee that his government would charge one of our own citizens under like circumstances; but it should be recollected that European governments make no discrimination between natives and foreigners. The high or low rates are the same for all. Under such circumstances retaliatory measures are not resorted to by us in regard to any other subject.

The oppression to which an alien is subjected at home has never been held as a reason for oppressing him here, even prior to his taking steps to become a citizen. If he holds real estate, we do not levy extraordinary taxes thereon commensurate with what that same property would be taxed if owned in his country by one of our citizens. Why should a different rule be followed in regard to property in an invention?

But there is a reason, founded in sound policy, why greater liberality should be exercised towards a foreign inventor than towards the alien owner of tangible property. He pays a consideration, which the other does not: by taking out a Patent, he makes the subject thereof public property at the end of fourteen years. The benefits of the invention are then secure, and can never be lost to the world. High charges deter inventors from parting with their secrets. Many an invention is thus strangled in its birth, which, under other circumstances, might have been developed into something of vast consequence to the world.

There are no lost arts under a liberal and well-regulated Patent Office system; and this is one of its great advantages. If foreign nations choose to place these chief means of human progress in subordination to the requirements of their respective exchequers, we are forbidden to imitate them, both by the condition of our treasury and the well-established policy of our government.

Finally, while we extend the free and full benefits of all our institutions to the alien who comes hither to seek them, should not a course equally liberal be pursued in regard to inventions,—the creations of his ingenuity? Why should these be subjected to incapacities and discriminating taxation? In regard to them should not the whole world be regarded as one republic, of which we should seek to render our Patent Office the capital, wherein every region should be permitted a free representation? We tolerate no onerous discriminations against the foreign exhibitors in our Crystal Palaces. At the cannon's mouth we extend the protection of our flag to the alien who has simply declared his purpose of becoming a citizen, in the same manner as though he were native born. Ought we to levy a discriminating tax upon the offspring of genius that seek our shores for the express purpose of being naturalized among us?

From the preceding considerations it seems evident that a great change should be made as to the fees required from foreign applicants. It is respectfully submitted, whether the most convenient, wise, and beneficial rule will not be to abolish all distinctions growing out of geographical considerations, and to charge every applicant a fair remuneration for the trouble given by him to the Office, but no more.

Such a course would be just, generous, and noble; seeking to raise no revenue from those who are the special instruments of human advancement, showing a confidence in the capability of our own inventors to cope on equal terms with those of all the world besides, and taking no inconsiderable step in bringing about that great brotherhood of nations for which a higher civilization is gradually preparing the world.

A change in the manner of taking testimony to be used in cases pending before the Patent Office seems indispensable. There is at present no power to compel the attendance of a witness in such cases, nor to oblige him to answer questions; and it is even doubtful whether he can be punished for perjury. It will not be difficult to provide a remedy for this defect. It will be even practicable to enable a party to obtain a compulsory *affidavit*, or, in other words, to take an ex-parte deposition, to be used the same as an affidavit, which would often be a matter of very great consequence.

The present mode of appealing from the decisions of the Office is extremely inconvenient, and in many respects objectionable. The Patent Office should possess within itself the entire power to act upon a case up to the time when a Patent issues. The whole matter should then be turned over to the Judiciary. If it be thought expedient to have the action of a strictly legal mind brought to bear upon a Patent before it issues, that mind should form a portion of the Patent Office itself, and be made to exercise a supervisory influence upon all the Patents that are issued by the Office. At present the appellate power is vested practically in either of two highly respectable and intelligent judges, either of whom, under proper circumstances, would no doubt be able to exert a salutary supervisory influence over the Office and its decisions. But the two do not act conjointly, and therefore unity of decision is hardly possible. A few cases go up by appeal out of the hundreds that are decided by the Office. The appellate, and therefore controlling power, cannot be expected under such circumstances to give *tone and character to the action of the Office.* Besides, under the present practice, the drawings and models have to be removed from the Patent Office to the offices of the respective appellate judges: away from the custody of their proper keepers, they are often injured, and always liable to be destroyed or lost.

If it is thought expedient to have as wide a range for appeals as at present, it is believed that a much more convenient and judicious arrangement would be found in having a judicial officer to hear appeals from the decisions of the examiners, with the power of ultimate appeal to the commissioner.

Many other minor improvements in the practice of the Office might be suggested; but they would look to a general change in the existing laws on the subject. Should such a course be thought expedient,

suggestions can readily be made to those having the matter in charge.

There is one very important question, entirely surrounded with difficulties, which deserves a passing notice. It relates to the practicability of preventing the protracted and expensive controversies that are almost sure to absorb a great portion of the value of every truly valuable patent during its proper lifetime, and which lay the foundation for many of the claims for extension presented to this Office.

To remedy this evil some have proposed that notice of the pendency of applications for Patents should be published, and that the Patent afterwards obtained should convey an absolute unquestionable title. But on the other hand it has been contended that this would introduce greater evils than it would cure; inasmuch as it might work a great injustice to many who would never hear of the notice, or who might not then be in a condition to engage in the controversy. Others have only proposed that after such a notice the Patent should be incapable of being collaterally brought into question, and, like a judgment at law, only be liable to be assailed by a direct proceeding, which would cut off much of the present litigation. But in opposition to this it has been objected that by giving such notice many a poor inventor would be harassed and prevented from procuring his Patent, which, if once obtained without the knowledge of evil-disposed opponents, might be at once turned to account. This objection has no small weight.

The least objectionable course on this subject (if any thing is to be done) would seem to be to allow the patent to issue without notice, as at present, and to possess only its present validity; but that the applicant, either in the beginning or at any subsequent time during its lifetime, should be permitted, if he thought proper, to have the notice given; and that the Patent, if afterwards obtained, should not thereafter be capable of being collaterally assailed.

It will be seen that the usual reports of examiners are herein omitted. This has been done in part because it was believed that their time might be more usefully employed; and in part because such reports rendered it almost impossible to avoid invidious distinctions between patentees who suppose themselves equally meritorious. It was thought a better course to give a clear and brief description of each patent, without further comment, and leave it to the public to make the proper discriminations. A mere publication of the claims, as has hitherto been done, conveys in most cases no adequate idea of the different inventions. It is confidently believed that the advantages resulting from having the Patents more fully described, and those which required it, or which could in that manner be made more perspicuous, accompanied by a cut showing the parts referred to, would be amply sufficient to justify the expense attending upon such an arrangement. The report has therefore been drawn up with a view to such an illustration of the different Patents.

The attention of Congress is invited to the importance of providing some adequate means of preventing attempts to obtain patents by improper means. Several cases have occurred during the past year wherein persons interested in pending cases have sent or offered money to the examiners having those cases in charge, for the purpose

of securing favorable action upon their respective applications. This has sometimes apparently been done through ignorance or thoughtlessness, but in other cases evidently with a premeditated corrupt intent. In cases of this kind it seems proper and necessary that penalties commensurate with the enormity of the offence should be visited upon the heads of wilful transgressors.

Respectfully submitted,

CHARLES MASON, *Commissioner.*

Hon. LINN BOYD,

Speaker of the House of Representatives.

CLASSIFIED LIST OF PATENTS THAT HAVE EXPIRED DURING THE YEAR 1853.

CLASS I.—AGRICULTURE, *including instruments and operations.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Beehives	Samuel C. Myers	Mount Pleasant, Pa.	July 22
Beehives	John Sholl	New York, N. Y.	Nov. 29
Beehives, (additional improvement, March 29, 1841.)	William M. Hall	Wallingford, Conn.	Dec. 27
Churn	Milo B. Hough	Dover, Ohio	Jan. 21
Churn	John S. Thomson	Wyalusing, Pa.	July 27
Corn-sheller	Alonzo R. Dinsmore	Westchester, N. H.	Feb. 28
Corn-sheller	W. McIlroy, jr., Bartley, and William Boon.	Greenwich, N. J.	Mar. 30
Corn-sheller	William R. Parker	Milton, Del	July 9
Corn-sheller	Lester E. Dennison	Saybrook, Conn	Aug. 12
Corn-sheller	Samuel H. Kisinger and E. G. W. Stake.	Williamsport, Md.	Oct. 31
Corn-sheller	John Mercer	Harrisville, Ohio	June 24
Cultivator, corn	John B. Smith	Norfolk, Va	April 15
Cultivator, garden, (antedated Oct. 10, 1838.)	John B. Smith	Norfolk, Va	April 10
Harrows, revolving	Moses G. Cass	Utica, N. Y	Sept. 10
Hulling clover-seed and other grass-seed.	Abraham Keagy	Morrison's Cove, Pa.	June 24
Mowing-machine	Asa P. Trask and Davis Aldrich.	Ellington, N. Y	Oct. 16
Mowing, attaching scythes to snathes	Ebenezer G. Lamson	Shelburne, Mass.	July 2
Plough	William Small	North Argyle, Mass.	April 22
Plough	Ebenezer G. Whiting	Racine, Wiscon. Ter.	July 11
Plough	Ambrose Barnaby	Ithaca, N. Y	Sept. 11
Plough	Josiah Dutcher	New York, N. Y.	Oct. 9
Plough, coupling, &c	J. Card and G. Newell	Mentor, Ohio	Nov. 9
Plough, hill-side and horizontal	John W. Jordon	Lexington, Va.	April 19
Plough, mould-board of	S. Witherow and David Pierce	Philadelphia, Pa.	Oct. 5
Rake, hay and grain harrow	George Davis	Belmont, Ohio	July 22
Rake, hay and grain, rake-teeth for, (extended.)	Hezekiah Haynes	Middletown, Vt.	June 18
Rake, hay, revolving	E. B. and M. D. Wells	Morgantown, Va.	Sept. 20
Seeding, planting corn	Niram R. and Orin G. Merchant	Guilford, N. Y	Oct. 12
Seeding, planting corn, &c	David S. Rockwell	New Canaan, Conn	Mar. 12
Seeding, planting-machines	Moses Atwood, jr.	Hampstead, N. H.	June 24
Seeding, planting-machines	John M. Forrest	Princess Ann c. h., Va.	June 25
Seeding, sowing grain, plaster, &c	Samuel Hoffer	Londonderry, Pa.	July 17
Seeding, sowing seed	M. and S. L. Seward	Guilford, Conn	July 27
Smut-machine	William C. Grimes	York, Pa	Mar. 25
Smut-machine	John B. Yates	Sherryville, Va.	Oct. 12
Smut-machine, (extended.)	Leonard Smith	Plattsburgh, N. Y.	Oct. 18
Smut-machine	Luther B. Walker	Orangeburgh, N. Y.	Oct. 18
Smut-machine	Samuel W. Foster	Scio, Mich	Dec. 21
Smut-machine, cleaning grain	George Mann, jr.	Lockport, N. Y	June 29
Smut-machine, cleaning grain	Thomas McCrea	Ann Arundel, Va.	Aug. 9
Smut machine, cleaning wheat	Elisha W. and Wm. B. Young	Parkman, Ohio	July 2
Thrashing-machine, and cleaning grain	Matthew McKeever	Staunton, Va	Mar. 15
Thrashing-machine, shelling and hulling grain.	Thomas Elliott, jr	Middletown, Ky.	Mar. 26
Thrashing-machine, teeth for	Jeremiah Wrightson	Tobacco Stick, Md.	May 17
Winnowing-machine, fanning-mill	Alfred Ervin	Jefferson, Md.	Sept. 30

CLASS II.—METALLURGY *and manufacture of metals and instruments therefor.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Bolts and nuts, and squaring and finishing the heads of, (additional improvement, Sept. 10, 1840.)	John Bellemere	Philadelphia, Pa.	Sept. 25
Dressing iron and other substances	John G Tibbets	New York, N. Y.	June 21
Drilling iron	John H. Currier and Wing H. Taber.	Fairhaven, Mass.	July 8
Drilling metallic and other substances	Elisha Hall	Byron, N. Y.	Aug. 29

Classified list of expired patents.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Forges, blacksmiths', producing the blast for.	William and Heman W. Sharp...	Catherine, N. Y.....	Aug. 2
Furnace, blacksmiths', burning anthracite.	Edward Nichols and Jas. Augur.	Hampden and New Haven, Conn.	Aug. 21
Furnace, revolving fan-wheel for, (extended.)	Frederick P. Dimpfel.....	New York, N. Y....	Dec. 28
Furnace, smelting iron ore, (extended.)..	Augustus Roth.....	Pottsville, Pa.....	Oct. 31
Hammers and hatchets, socket of.....	Phineas Eastman.....	Canaan, N. H.....	July 17
Latch, door.....	Henry Duntze	New Haven, Conn...	July 6
Lock and double-catch bolts	Conrad Leibrich	Philadelphia, Pa....	Oct. 5
Lock, door, (additional improvement, January 14, 1840.)	Erastus Finney	Cleveland, Ohio.....	June 18
Lock, door, and latches	Nathan and Caleb Hunt	Cleveland, Ohio.....	July 29
Lock, door, safety, (antedated March 14, 1839.)	William Stillman	Westerly, R. I.....	Sept. 14
Nails, making.....	Walter Hunt.....	New York, N. Y....	Nov. 12
Needles, manufacture of.....	Abel Morrall.....	Studley, Gt. Britain.	Dec. 21
Padlocks and other locks	Joseph Nock	Philadelphia, Pa....	July 16
Pipes, casting and drawing lead	Joseph C. Vaughn and Frederick Leach.	Tioga, N. Y.....	Dec. 31
Punching metal.....	Samuel H. Brown.....	Wheeling, Va.....	Aug. 14
Rivets, making	Francis A. Cannon	Boston, Mass.....	Sept. 25
Riveting metallic plates for boilers.....	Robert Smith.....	Great Britain	Sept. 8
Saw-set	Joseph Beach and David Culver .	Hartford, Conn.....	Sept. 20
Screws, wood, and rivets, turning the heads of.	Henry Crum.....	Charlestown, N. Y..	Nov. 16
Screw-wrench	Henry W. Hewet	Troy, N. Y.....	Aug. 24
Sockets for holding tools, (extended.)...	Herrick Aiken.....	Franklin, N. H.....	Dec. 27
Stirrups for saddles.....	John Carrel.....	Petersburgh, Va.....	June 7
Tin, &c., double-seaming	Hiram Van Pelt and Benj. Armstrong.	Troy, N. Y.....	Sept. 30
Tuyere, iron, blacksmiths', (antedated December 21, 1838.)	John Shugert.....	Elizabeth, Pa.....	May 9
Umbrella-runner.....	Joseph Barnhurst	Francisville, Pa.....	June 25
Vice	John Wetherell.....	Alleghany, Pa.....	April 22
Window-blind fasteners	Mileden M. Isbel.....	New Haven, Conn...	June 29
Wire rope, round, flexible	Isaac McCord.....	Harrisburgh, Pa....	July 6

CLASS III.—MANUFACTURES OF FIBROUS AND TEXTILE SUBSTANCES, *including machines for preparing fibres of wool, cotton, silk, fur, paper, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Carding machine, wool	Nathan Freeman.....	Lowell, Mass.....	Dec. 31
Cloth, napping and making water-proof..	William K. Phipps.....	Framingham, Mass..	Aug. 31
Cocooneries, lodgements in, &c.....	Sol. M. Jenkins, M. D.....	Easton, Md.....	Sept. 28
Cordage, long, manufacturing.....	William E. Maginnis.....	Philadelphia	Nov. 9
Cordage, manufacturing	Alfred Hathaway.....	Boston, Mass.....	July 9
Cordage, twine and cord.....	Jacob Sloat.....	Sloatsburg, N. Y.....	Nov. 9
Cotton, roping	Jesse Whitehead.....	Manchester, Va.....	June 24
Felt, making, in the manufacture of fur hats.	Hezekiah S. Miller	Philadelphia, Pa.....	Mar. 5
Flier and bobbin for twisting silk	Oliver Ellsworth	Hartford, Ct.....	July 12
Gin, cotton	William Whittemore, jr.....	W. Cambridge, Mass.	May 25
Gin, cotton	Henry Conklin.....	Poughkeepsie, N. Y.	June 7
Gin, cotton	John Beath.....	Boston, Mass.....	July 12
Hats, coloring.....	George M. Johnson	Port Deposite, Md...	Dec. 31
Hats, napping.....	Andrew Rankin.....	Newark, N. J.....	Sept. 30
Loom, hand, for weaving fringe	Eliza Ann B. Judkins.....	Portland, Me.....	Feb. 2
Oakum, making.....	James Tibbals	Haddam, Ct.....	Feb. 8
Paper, making.....	Wm. and Abij. L. Knight and Edward F. Condit.	Whippany, N. J.....	Sept. 25
Paper, sizing.....	W. W. Wilson and Charles Dickerman.	Westfield, Mass.....	Aug. 3
Pulp-dressing, of which paper is made..	Nathaniel Hebard..... ...	Dorchester, Mass....	Dec. 27
Reel for chalk-lines.....	Gerard Sickles.....	Middletown, Conn...	Dec. 31
Reeling, spinning, and twisting silk.....	Jacob Pratt.....	Sherburne, Mass....	Oct. 12
Silk-twisting.....	Gamaliel Gay.....	Philadelphia, Pa....	June 7
Spinning, cop-speeder for.....	Truman Estes & Wa...	Bennington, Vt.....	July 26

Classified list of expired patents.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Spinning hemp and other fibrous materials.	Charles W. Brown	Roxbury, Mass	July 16
Spinning hemp, flax	Moses Day	Roxbury, Mass	June 24
Spinning wool, (antedated Feb. 22, 1839.)	Isaac B. Hartwell	Northfield, Vt	June 7
Winding, spooling wool from the breaker carding-machine.	Zachariah Allen	Providence, R. I	Sept. 10
Wool-burring	Henry Concklin	Poughkeepsie, N. Y	July 6

Class IV.—Chemical processes, manufactures, and compounds, *including medicine, dyeing, color-making, distilling, soap and candle making, mortars, cements, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Acid, sulphuric, manufacturing	James Hargreaves	Patterson, N. J	Aug. 24
Caoutchouc, manufacturing various articles, preparing with sulphur.	C. Goodyear, (assignee of N. Haywood.)	Boston, Mass	Feb. 24
Cement, artificial stone, &c., forming	John Danforth Greenwood and Richard Wynn Keene.	England	Oct. 9
Composition for burning in lamps	Isaiah Jennings	New York, N. Y	Dec. 31
Fluid, blue, for writing	Henry King	Baltimore, Md	Nov. 7
Iron, protecting from oxidation	Palmer Sumner and P. Naylor	New York	Oct. 18
Lead, white, manufacture of	Chas. Button & Harrison G. Dyar.	London, England	April 10
Lead, white, separating the oxide of lead.	Edward Clark	Saugerties, N. Y	July 11
Lead, white, separating the oxide of lead.	Edward Clark	Saugerties, N. Y	Dec. 5
Liquids, mode of exaporating	William Henry	Laporte, Ind	Jan. 8
Matches, friction, composition of matter.	John H. Stevens	New York, N. Y	Nov. 16
Matches, friction, preventing accidental ignition.	John H. Stevens	New York, N. Y	Nov. 16
Matches, friction, retaining fire	John H. Stevens	New York, N. Y	Nov. 16
Soap, process of manufacturing	Arthur Dunn	Stamford Hill, G. B.	Aug. 23
Soda, carbonate, of, manufacturing	John Hemming	England	June 24
	Harrison Gray Dyar	Citizen U. S. in Eng.	
Turpentine, oil of, process of rectifying, which he calls camphine	Aug. V. H. Webb	New York	Feb. 19

Class V.—Calorifics, *comprising lamps, fireplaces, stoves, grates, furnaces for heating buildings, cooking apparatus, preparation of fuel, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Coal sifters	Horace Wells	Hartford, Conn	Dec. 31
Drying flour	John Ballantine and Adam Clark.	Zanesville, Ohio	March 4
Drying grain	Richard Else	Middlesex co., Eng.	Aug. 14
Fireplace	Sarah Hammond	Baltimore, Md	June 25
Flues of cooking-stoves	Ebenezer Ferren	Haverhill, N. H.	Nov. 12
Flues of cooking-ranges	Ebenezer Barrows	Boston, Mass	Dec. 31
Flues of stoves	Linus North	Palmyra, N. Y	Oct. 31
Flues of stoves	Micah Ketcham & W. A. Wheeler	Boston, Mass	Nov. 25
Furnace, economizing fuel and consuming smoke (extended.)	Frederick P. Dimpfel	New York, N. Y	May 9
Galley, ship's, for the distillation of salt water (extended.)	Enoch Hutchinson	Baltimore, Md	May 20
Gas burners, argand	Geo. Darricott and Joseph Nason	Boston, Mass	July 26
Kettles, sugar, setting and arranging	Maunsel White	New Orleans, La	Sept. 17
Lamps, burning camphene	Augustus V. H. Webb	New York	Feb. 19
Lamps, regulating the flame of	John S. Tough	Baltimore, Md	July 17
Lamps, glass sockets for	Henry Whitney & Thos. Leighton	Cambridge, Mass	Jan. 11
Lamps, screw head for	Patrick J. Clark	Meriden, Ct	June 7

Classified list of expired patents.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Lights, revolving, for light-houses	Benjamin F. Willard	Boston, Mass.	Feb. 20
Ovens, portable	Thaddeus B. Curtis	New Haven, Ct.	June 27
Stoves, coal, applied to furnaces	Eliphalet Nott	Schenectady, N. Y.	July 26
Stoves, coal or wood	Judson B. Galpin	New Haven, Conn.	Aug. 14
Stove, cooking (extended)	Darius Buck	Albany, N. Y	May 20
Stove, cooking	Micah Ketcham	Boston, Mass.	May 25
Stove, cooking	Elihu Smith	Troy, N. Y	Aug. 9
Stove, cooking	James Devine	Rochester, N. Y	Aug. 24
Stove, cooking	Elbridge McCollum	Weare, N. H.	Sept. 20
Stove, cooking	Noble Peck	Carmel, N. Y	Sept. 30
Stove, cooking	George D. Boyce	W. Wareham, Mass.	Dec. 27
Stove, cooking, coal, anthracite	William Davis and R. W. Lord	New York	Nov. 23
Stoves, cooking, draught arranging	John L. Lathrop	Provincetown, Mass.	Dec. 31
Stoves, cooking, with elevated ovens	John P. Williston and Willard A. Arnold.	Northampton, Mass.	Nov. 16
Stoves, cooking, Franklin	Abner R. Ring	Parma, N. Y	Dec. 12
Stove, cooking, railway	Anson Atwood	Troy, N. Y	April 10
Stoves, cooking, valve of	Hiram Root	Deerfield, Mass.	Sept. 8
Stoves, draught of, changing by an elliptical valve	Horace Bushnell	Hartford, Conn.	June 21

Class VI.—Steam and gas engines, *including boilers and furnaces therefor, and parts thereof.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Boilers, steam	Rd. Varick De Witt	Albany, N. Y	Sept. 25
Boilers, steam, furnaces of, increasing combustion by the decomposition of steam.	Lucien Maillard	New York, N. Y	May 18
Boilers, steam, furnaces of, supplying steam to promote combustion	John B. Petitval	Charleston, S. C.	July 17
Boilers, steam, inverted arch	John C. F. Saloman	Cincinnati, Ohio.	Nov. 16
Boilers, steam, preventing explosion of.	Philip C. Friese	Baltimore, Md	April 10
Boilers, steam, preventing explosion of (extended.)	Cadwallader Evans	Pittsburgh, Pa	April 15
Boilers, steam, preventing explosion of.	William H. Hale	Brooklyn, N. Y	Sept. 14
Boilers, steam, preventing explosion of.	Isaac N. Coffin	Washington, D. C.	Sept. 30
Spark arresters	Henry Wilton	Wrightsville, Pa.	Aug. 17
Spark arresters	William Knight	Chambersburg, Pa.	Oct. 26
Spark arresters	Leonard Phleger	Philadelphia, Pa.	Nov. 25
Spark arresters	Nicholas Turbutt	Fredericktown, Pa.	Dec. 7
Steam-engine, &c., apparatus to be substituted for the piston cylinder of.	Abram Patterson	Rush, Pa	Feb. 26
Steam-engine, locomotive, ascending inclined planes.	Davis H. Dotterer and Thomas Jackson.	Reading, Pa	Mar. 25
Steam-engine, locomotive, supplying water to.	Stephen Vail	Speedwell Iron Works, Morristown, N. J.	July 12
Steam-engine, rotary	Roger M. Sherman	Fairfield, Ct	Mar. 12
Steam-engine, rotary	John Drummond	Elizabethtown, N. J.	Aug. 8
Steam-engine, rotary	Wm. H. Baker & Sml. H. Baldwin	Cohoes, N. Y	Aug. 21
Steam-engines, valves, safety	John S. Bakewell	Pittsburgh, Pa	Dec. 21

Classified list of expired patents.—Continued.

CLASS VII.—NAVIGATION AND MARITIME IMPLEMENTS, *comprising all vessels for conveyance on water, their construction, rigging, and propulsion, diving-dresses, life-preservers, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Boats, life and anchor	Joseph Francis	New York, N. Y.	Jan. 11
Boats, life, constructing	George James	Philadelphia, Pa.	Jan. 21
Boats, towing on canals	Thomas Jackson	Reading, Pa.	June 25
Propelling boats, &c., canal and other	Wm. Leavenworth	New York, N. Y.	April 18
Propelling boats and other vessels	Benjamin D. Beecher	Prospect, Conn.	Dec. 31
Raising canal boats for repairing	N. R. Penrose and S. F. Palmer	Beaver Meadow, Pa.	May 11
Ships, preventing dragging their anchors, &c.	Russel Evarts	Madison, Ct.	Nov. 25

CLASS VIII.—MATHEMATICAL, PHILOSOPHICAL, AND OPTICAL INSTRUMENTS, *including clocks, chronometers, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Area of irregular figures, mode of finding	Thomas Wood	Smithfield, Ohio	July 22
Lightning conductors	Joseph S. Barber	Gloucester	Mar. 5
Odometer	Smith Beers	Waterbury, Conn	Sept. 14
Spectacles, preparing the glasses, &c.	Charles H. L. Jackson	New York	April 20
Spectacles, revolving glasses, &c.	Christopher H. Smith	Niagara Falls, N. Y.	June 29
Spectacles, side glasses	Daniel Thaxter	Hingham, Mass.	June 18

CLASS IX.—CIVIL ENGINEERING AND ARCHITECTURE, *comprising works on rail and common roads, bridges, canals, wharves, docks, rivers, wiers, dams, and other internal improvements, buildings, roofs, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Blinds, window	Alonzo S. Grenville and Thos. John Lewis.	Cambridge & Boston, Mass.	Aug. 9
Boring earth, auger for	George Page	Baltimore, Md.	May 8
Bridges, construction of	Henry Wilton	Wrightsville, Pa.	June 24
Bridges, lattice	Herman Haupt	York, Pa.	Dec. 27
Bridges, wooden brace	Stephen H. Long	United States Army.	Nov. 7
Bridges, wooden frame suspension (extended).	Stephen H. Long	United States Army.	Nov. 7
Canal locks, balance for	Josiah White	Philadelphia, Pa	May 17
Canal locks, sliding valves	William Lake	Richmond, Va	June 7
Canal locks, wicket gates for	William L. Potter	Clifford Park, N. Y.	Aug. 31
Drag for removing stones from the bottom of lakes.	Philander Lee	Lyme, N. Y.	Oct. 31
Dredging machine	Wm. P. Brayton & Jas. Hamilton	New York, N. Y.	Jan. 8
Drilling rocks	Isaac M. Singer	Lockport, Ill.	May 16
Excavating and removing earth	George W. Cherry	Washington, D. C.	Jan. 16
Excavating and removing earth, crane excavator for (extended).	William S. Otis	Philadelphia, Pa.	Feb. 24
Excavating and removing earth, scraper for.	John Scholder	Canton, Ohio	Sept. 25
Houses, portable, constructing	Frederick S. Barnard	Philadelphia, Pa.	Dec. 21
Inclined planes on railroads, ascending and descending.	William F. Ketchum	Buffalo, N. Y.	Mar. 20
Inclined planes on railroads, ascending and descending.	John Mercer	Harrisville, Ohio	June 21
Inclined planes on railroads, ascending and descending.	John Drummond	Elizabethtown, N. J.	June 21
Railroad, chairs of, &c.	Moncure Robinson	Philadelphia, Pa.	Mar. 16
Railroad, chairs of, &c.	Brittom M. Evans	Lancaster, Pa.	Dec. 27
Railroad, cleaning the rails, &c.	Thomas S. Ridgaway	Pottsville, Pa.	Oct. 31

Classified list of expired patents.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Railroad, cleaning the tracks	John N. Dennison & Elias Kirkpatrick.	Plainfield, N. J	July 29
Railroad, construction of	James Stimpson	Baltimore, Md	July 26
Railroad, switches for, self-adjusting	John C. Past	Morrisville, Pa	Aug. 21
Railway cars, and mode of fastening	Edward Tilghman	Philadelphia, Pa	Dec. 5
Roofs, covering with metal	Peter Naylor	New York, N. Y	Sept. 11
Snags, sawing or cutting	James Hamilton	New York	June 27
Streets and roads, grading	Randal Fish	New York	Nov. 9
Stump extracting	Benjamin Burling	Catherine, N. Y	June 25
Walls and ceilings, protecting from fire	Peter Naylor	New York	Feb. 22

Class X.—Land conveyance, *comprising carriages, cars, and other vehicles, used on roads and parts thereof.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Brakes, arresting the motion of carriage wheels.	Cyrus Walker	Lewisbury, Va	July 8
Brakes, safety, self-acting, for railroad cars.	George S. Griggs	Roxbury, Mass	Dec. 31
Carriage bodies, hanging	Azima Vallerchamp	McDowellsville, Pa	Oct. 12
Carriage bodies, hanging	Dimon B. Barnum	New Field, Ct	Oct. 16
Carriage bodies, hanging	Ira W. Brittan	Medina, Ohio	Oct. 26
Carriage, railroad, constructing	Lewis J. Germain	Cattskill, N. Y	May 7
Carriage shaft, clip for	John Cooper	New York	Jan. 22
Coaches, pleasure carriages, and railroad cars.	Thomas Shriver	Cumberland, Md	Nov. 7
Journals of railroad cars, constructing the bearings and oil boxes.	John H. Tims	Newark, N. J	Oct. 31
Sleighs	Daniel Carpenter	Nelson, N. Y	Sept. 20
Springs, elliptical, for carriages	Frankling Hatch and Jonathan W. Terry.	South Cortlandt, N.Y	July 10
Springs, elliptical, for carriages	Sumner King	Connecticut	Oct. 31
Springs, elliptical, setting and fitting	George J. Neveil	Philadelphia, Pa	Sept. 20
Springs for railroad carriages	Patrick Riley	Shamokin, Pa	June 21
Tire, bending	Aaron Whitcomb	Choconut, Pa	Aug. 21
Wagons, carts, &c., attaching boxes to	Jason C. Osgood	Chittenango, N. Y	Sept 28
Wheels, boxes, and axles of carriage, applying anti-friction rollers to.	George G. Tibbets	New York, N. Y	July 22
Wheels, boxes for axle-trees and gudgeons (extended).	Isaac Babbitt	Boston, Mass	July 17
Wheels, car	David Cockley	Lancaster, Pa	Oct. 29
Wheels, car, iron	William W. Pennell	Lancaster, Pa	Feb. 8
Wheels for carriages	Elisha Tolles	Hartford, Conn	Dec. 27
Wheels, carriage, hubbands for	Samuel Farrand	Newark, N. J	June 11
Wheel-hubs and axles for cars, cutting the seats.	Thomas J. Butter	Johnstown, Pa	Dec. 31
Wheel-hubs, carriage, attaching to the arms of axle-trees.	George Hunt	Prattsville, N. Y	July 8
Wheel-hubs, carriage, attaching to axles.	John Loudon, jr	Auburn, N. Y	Oct. 12

Class XI.—Hydraulics and pneumatics, *including water-wheels, windmills, and other implements operated on by air or water, or employed in the raising and delivery of fluids.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Bellows, portable	Alexander Ewing	New York	Oct. 31
Cocks, molasses gate	Jonathan D. Kellogg and Jus. Wright, assig. to J. D. Kellogg.	Northampton, Mass.	Aug. 16
Cocks, molasses gate	Jervice Whittemore	Boston, Mass	Oct. 9
Cocks, stop	Chas. F Johnson & J. J. Speed, jr.	Oswego & Ithaca, N.Y	June 21

Classified list of expired patents.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Cocks, stop	Air Davis	Boston, Mass	Oct. 16
Engine, fire	John Williams, jr.	Salem, N. Y.	May 11
Pump, cattle	Andrew Bailey	Jefferson, Ohio	Aug. 3
Pump, double, preparing moulds for casting.	Foster Henshaw	Brookfield, Mass.	June 29
Pump, force, for wells, constructing the parts.	Thos. W. H. Mosely	Paris, Ky	Sept. 30
Pump, stone, water-tight joints	Abraham Van Vorhes	Hebardsville, Ohio	May 3
Water-wheel	Eliza Martineau, adm'x of John Martineau, deceased.	Elbridge, N. Y	April 18
Water-wheel	William C. Bishop	Ovid, N. Y.	Sept. 5
Water-wheel	Timothy Rose	New York	Oct. 18
Water-wheel, letting the water on	Thomas Ruble	St. Marys, Ind.	Aug. 29
Water-wheel, reaction, moulding preparatory to casting	Stephen Parsons	Edgecomb, Me	April 18
Water-wheel, spiral bucket	Lorenzo D. Adkins	Perry, Ohio	May 17
Windmill	Wantsford Evans	Dumfries, Va	July 12

Class XII.—Lever, screw, and other mechanical power, *as applied to pressing, weighing, raising, and moving weights.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Balance, or counter scales, for weighing.	George White	Louisville, Ky.	Nov. 16
Balance, scales for weighing	Jonathan Ball	Buffalo, N. Y	April 20
Jack-screw	Stephen Vail	Morris, N. Y	May 7
Press, cheese	Adin Gaunt	Springfield, N. J.	July 6
Press, cheese	Wm. W. Townsend	Shoreham, Vt.	Dec. 18
Press, construction of	John J. Wise	Baltimore, Md.	May 16
Press, cotton	Jas. R. Hitchcock & W. F. Serrell.	New York, N. Y.	Sept. 30
Press, cotton	John Price	Nashville, Tenn.	Dec. 7
Press, cotton and hay	Charles W. Hawkes	Brunswick, Me.	April 18
Press, cotton and hay	Joseph C. Baldwin	Staunton, Va	Feb. 22
Weigh locks, for weighing canal boats and other bodies.	Jeremiah Brainard	Rome, N. Y.	July 17

Class XIII.—Grinding-mills and mill-gearing, *containing grain mills, mechanical movements and horse-powers, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Coffee-mill	John Rittenhouse	Germantown, Pa.	July 2
Grinding and crushing corn, mill for	J. C. and C. B. Baldwin	Virginia	June 26
Grist-mill	David D. Wagener	Pittsburg, Pa	Jan. 8
Grist-mill	Oliver Wyman	E. Cambridge, Mass.	April 18
Grist-mill	Henry Pearce	Cincinnati, Ohio	July 28
Horse-power	William E. Arnold	Rochester, N. Y.	April 26
Horse-power, endless chain	Moses Davenport	Phillips, Me.	July 10
Mill, paint	Joseph W. Webb	Mount Morris, N. Y.	Feb. 15
Mill, spindles for	Joseph C. Gentry	Dayton, Ohio	Sept. 25
Millstones, dressing	Shadrach Trumbull	Suffield, Ct.	Aug. 2
Motion, double-acting, reciprocating	Christian Willson	Bedford, N. Y.	Oct. 5
Motion, in machinery, to be used as a substitute for cog-gearing, mode of increasing, reducing, and communicating.	Frederick S. Barnard	New York, N. Y.	Sept. 10
Power, manual, mode of driving machinery.	Ammi West	Greene, Maine	Aug. 16
Shafts, vertical, and spindles, preventing friction and adhesion in the steps or gudgeons of	Stephen Parsons	Edgecombe, Maine	June 7

Classified list of expired patents.—Continued.

CLASS XIV.—LUMBER, *including machines and tools for preparing and manufacturing, such as sawing, planing, mortising, shingle and stave, carpenters' and coopers' implements.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Barrels, vents for	Samuel Pike	Brattleboro', Vt.	July 12
Boring posts	William H. Shay	New York, N. Y.	Nov. 25
Boring timber	Moses Hubbell, (assignee of Roswell Hubbell.)	Sheffield, Ohio	Oct. 26
Boxes, wooden, preparing wood for	Jacob Bentz	New York	Sept. 20
Mitering and dovetailing boards	Richard Urann	Boston, Mass	Oct. 26
Mitering and dovetailing the ends of boards, &c.	Air Davis	Princeton, Mass	Aug. 21
Mortising, tenoning, and boring machine.	Barnt Richtmyre and James H. Martin.	Conesville, N. Y.	July 16
Planing-machine	Freeman Walcott and James H. Hutchinson, (Hutchinson, assignee of Walcott.)	Boston, Mass	July 16
Saw, circular, preparing blocks for matches.	Jonathan Morgan	Portland, Me	June 27
Saw, circular, relieving the collar of a	Manassah Andrews & James Sproat	Taunton, Mass	Dec. 31
Saw-mills	Eden Baldwin	Ashfield, Mass	Jan. 31
Saw, rotary, for cutting round tenons	Charles Whitsitt	Connersville, Ind.	Sept. 25
Screws, cutting in wood	Samuel H. Wills	Abingdon, Va	June 18
Shingles, cutting	Ludram M. Parsons	Castleton, Vt	Mar. 12
Shingles, cutting	Justus Hinman, John Thatcher, and Alonzo Palmer.	Persia, N. Y	Mar. 25
Shingles, cutting from steamed, boiled, or other timber.	Daniel C. McMillen, John B. Knoll, Thomas S. Henry, and Matthew Knoll.	Persia, Collins, and Tully, N. Y.	Sept. 10
Shingles and heading for barrels, cutting from steamed or boiled timber.	J. Burt and E. Smith	Sullivan, N. Y.	July 9
Shingles, sawed, planing and dressing	Oliver N. May	Windsor, N. Y.	April 29
Staves, blind-slits, cutting	Hardin Branch	New York, N. Y.	May 3
Staves, cutting	Jonathan Burt and Erasmus Smith.	Sullivan, N. Y.	June 29
Staves, sawing	Royal E. House	Choconut, Pa	Aug. 12
Staves, sawing	Hart Pepper	Southwick, Mass.	Sept. 3
Tools used in the manufacture of barrels.	William G. Burr	Mount Pleasant, N.Y.	Oct. 12

CLASS XV.—STONE AND CLAY MANUFACTURES, *including machines for pottery, glass-making, brick-making, dressing and preparing stone, cements, and other building materials.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Brick-press	Daniel Carpenter	Cortland, N. Y.	July 26
Clay and mortar, mixing, for making brick	Ansel Teall	Waterloo, N. Y.	Mar. 12
Kiln, lime	A. H. Tyson	Baltimore, Md	Sept. 28
Mortar, preparing for the manufacture of bricks.	Oran W. Seeley	Sodus, N. Y.	Mar. 5
Pipes, earthen or cement, for conveying water.	Charles Stearns	Springfield, Mass.	May 8

Classified list of expired patents.—Continued.

CLASS XVI.—LEATHER, *including tanning and dressing, manufacture of boots, shoes, saddlery, harness, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Boot-crimps	Joseph Sanderson	Cincinnati, Ohio	June 7
Boot-crimps	Horace Ferre	Springfield, Mass	Sept. 25
Boots and shoes, cutting	Jeremiah B. Keen	Bridgeton, N. J.	June 21
Boots and shoes, heel-plates for	Wm. Lewis and Wm. H. Lewis	New York	Oct. 31
Crimping leather, machine, regulating the jaws.	John Goodwin, jr.	Sterling, Mass	May 30
Curriers' and tanners' knife, sharpening.	Warren Egleston	Troy, N. Y	Jan. 8
Harness, bridle-bit, for horses	Dan. Shaw Balch	Bradford, Vt	Aug. 23
Hides, constructing rollers for pressing	Lewis R. Palmer	Maryland, N. Y	Dec. 31
Leather, rolling	Thomas J. Patterson, (assignee of Wm. Coburn.)	Mount Joy, Pa	Oct. 31
Leather, splitting	Horace White	Binghamton, N. Y.	Aug. 2
Leather, stitching	Samuel Sheldon	Cincinnati, Ohio	Aug. 3
Tanning hides and skins	William Herapath	Bristol, England	May 30

CLASS XVII.—HOUSEHOLD FURNITURE, MACHINES, AND IMPLEMENTS FOR DOMESTIC PURPOSES, *including washing machines, bread and cracker machines, feather-dressing, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Bedsteads, attaching curtain-posts to	Thomas Early	Washington co., Tenn.	Jan. 8
Bedsteads, constructing	C. J. Fountain, J. F. Adams, and G. F. Hillyer.	New York	April 20
Bedstead fastening	Joseph Rodefer	Cincinnati, Ohio	Dec. 18
Bedstead, sofa, raising or inclining	Edmund Cherrington	Boston, Mass	Feb. 9
Bedstead, tightening sacking-bottom of.	John Hart	Nicholasville, Ky	June 21
Bedstead, tightening sacking-bottom of.	Benijah Bosworth	Fayette co., Ky	Dec. 14
Bells, hanging and mode of constructing.	Ebenezer Dewey	New York, N. Y	April 10
Brooms, metallic clasp or head for	Isaac Cheney	Leyden, Mass	June 25
Crackers and biscuit, making and baking.	Benjamin F. Mason	Kennebunk-Port, Me.	June 6
Cutting potatoes	Abel Williams	Ashfield, Mass	Mar. 12
Sausages, making	G. D. Metettal	Pittsburg, Pa	Aug. 29
Washing-machine	Samuel Swett, jr	Portsmouth, N. H	July 12
Washing-machine	Isaac Leavitt, Adnah Gilmore, and William Sturtevant.	Turner, Me	Aug. 9

CLASS XVIII.—ARTS, POLITE, FINE, AND ORNAMENTAL, *including music, painting, sculpture, engraving, books, paper, printing, binding, jewelry, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Ink, supplying to the pens of paper-ruling machines.	Lewis Edwards	Norwich, Ct	Aug. 31
Music, writing	Thomas Harrison	Springfield, Ohio	Oct. 26
Pen-holder	William Fife	Philadelphia, Pa	Sept. 28
Pencil-case, ever-pointed	John Hague	New York, N. Y	Aug. 16
Pencil-case, ever-pointed	J. Stockman and S. L. Hopper (assignees of G. W. Simons.)	Philadelphia, Pa	Oct. 12
Piano-forte	William Cumston	Boston, Mass	Aug. 3
Piano-forte	Jonas Chickering, John Mackay, and William H. Mackay (assignees of Alpheus Babcock.)	Boston, Mass	Oct. 31
Piano-forte, action of	John J. Wise	Baltimore, Md	June 27
Piano-forte, action of	Hiram Herrick	New York	Oct. 26
Printing-press	William and Thomas Schnebly	Hagerstown, Md	Sept. 7
Printing-press	J. Lemuel Kingsley	New York	Oct. 31

Classified list of expired patents.—Continued.

CLASS XIX.—FIRE-ARMS AND IMPLEMENTS OF WAR, *and parts thereof, including the manufacture of shot and gunpowder.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Fire-arms	David Edwards	Zanesville, Ohio	April 25
Fire-arms	Nathan Starr	Middletown, Ct.	May 3
Fire-arms	Benjamin F. Smith	South Hadley, Mass.	Dec. 5
Fire-arms, and apparatus used therewith	Samuel Colt	Paterson, N. J.	Aug. 29
Fire-arms, gun-breech	Silas Day, (assignee of Samuel Hall.)	New York, N. Y.	Dec. 31
Fire-arms, many-chambered	Elon B. Butterfield	Brattleboro', Vt.	Mar. 16
Fire-arms, rifles, water-proof	L. Bailey, J. B. Ripley, and W. B. Smith.	Portland, Me.	Feb. 20

CLASS XX.—SURGICAL AND MEDICAL INSTRUMENTS, *including trusses, dental instruments, bathing apparatus, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Fractures, apparatus for the cure of	Orson M. Allaben	Middletown, N. Y.	Dec. 12
Teeth, key for extracting	John McConnell	Philadelphia, Pa.	Sept. 20
Truss, for hernia	John M. Sinton	Hackettstown, N. Y.	June 27
Truss, for hernia	William B. Dey	Hope, N. J.	July 9
Truss, for prolapsus uteri	Allran Poteet	Danville, Ind	June 29
Truss, for prolapsus uteri	Wm. Reynolds	Camden, S. C.	Dec. 14

CLASS XXI.—WEARING APPAREL, ARTICLES FOR THE TOILET, &C., *including instruments for manufacturing.*

Inventions or discoveries.	Patentees.	Residence.	1839. Date of patent.
Buttons, mode of constructing bright dies for stamping highly polished blanks or shells for.	Green Kenrick, (assignee of Wm. B. Dunbar.)	Waterbury, Ct.	Oct. 31
Garments, cutting the bodies of coats in one piece.	William W. Wiswell	Portland, Me.	April 10
Garments, instruments for measuring the human body, &c.	Daniel Williams	New York, N. Y.	April 26
Garments, tailors' instruments for measuring.	John P. Barnett and Francis Story.	Cattskill, N. Y.	Nov. 12
Garments, tailors' draughting instruments	Edward J. Axford	Philadelphia, Pa.	Mar. 30
Razor-strop and case	Aaron and Luther Hill	Stoneham, Mass.	July 17
Shears, tailors'	Rochius Heinisch	Newark, N. J.	Feb. 27
Straps for pantaloons	M. H. Simpson	Boston, Mass.	May 30

CLASS XXII.—*Miscellaneous.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
			1839.
Coffins, lodgments in	Moses Leonard	New York	July 2
Ice, mode of obtaining and securing	Jos. E. Manuel	Philadelphia, Pa.	July 12
Pills, mode of counting	J. P. Peters	New York, N. Y.	June 27
Sun-flower leaves and rhubarb-plants as a substitute for smoking-tobacco, and for the formation of cigars.	Wm. D. Duff	Marietta, Pa.	Jan. 8
Trap for catching animals	William Biddle	Pittsburg, Pa.	July 12

ALPHABETICAL LIST OF PERSONS WHOSE PATENTS HAVE EXPIRED DURING THE YEAR 1853, WITH THEIR INVENTIONS OR DISCOVERIES, AND CLASS.

Patentees.	Inventions or discoveries.	Class.
Adkins, Lorenzo Dow	Water-wheel, spiral bucket	XI.
Aiken, Herrick	Sockets	II.
Allaben, Orson M.	Fractures, for cure of	XX.
Allen, Ethan	Locks for fire-arms	XIX.
Allen, Zachariah	Winding, spooling wool	III.
Andrews, Manassah, and James Sproat	Saw, circular, relieving collar	XIV.
Arnold, Wm. E.	Horse-power	XIII.
Atwood, Anson	Stove, cooking, railway	V.
Atwood, Moses, Jr.	Seeding, planting machine	I.
Axford, Edward J.	Garments, draughting instruments	XXI.
Babbitt, Isaac	Wheel boxes	X.
Bailey, Andrew	Pump, cattle	XI.
Bailey, Libbeus, John B. Ripley, and Wm. B. Smith,	Fire-arms, rifles, water-proof	XIX.
Baker, Wm. H., and Samuel H. Baldwin	Steam engine, rotary	VI
Bakewell, John S.	Steam engine safety valves	VI
Balch, Dan. Shaw	Harness, bridle bit	XVI
Baldwin, Eden	Saw-mills	XIV
Baldwin, Joseph C., and Cyrus B.	Corn-mill	XIII.
Baldwin, J. C.	Press, cotton and hay	XII.
Ball, Jonathan	Balance scales	XII.
Ballantine, John, and Adam Clark	Drying flour	V.
Barber, Joseph S.	Lightning conductors	VIII.
Barnaby, Ambrose	Plough	I.
Barnard, Frederick S.	Houses, constructing	IX.
Barnard, Frederick S.	Motion, substitute for cog-gearing	XIII.
Barnhurst, Joseph	Umbrella runner	II.
Barnett, Jno. P., and Francis Story	Garments measuring	XXI.
Barnum, Dimon B.	Carriage bodies, hanging	X.
Barrows, Ebenezer	Flues, cooking ranges	V.
Beach, Joseph, and David Culver	Saw set	II.
Beath, John	Gin, cotton	III.
Beecher, Benjamin D.	Propelling vessels	VII.
Beers, Smith	Odometer	VIII.
Bellemere, John	Bolts and nuts, heads	II.
Bentz, Jacob	Boxes, wood for	XIV.
Biddle, William	Trap	XXII.
Bishop, William C.	Water-wheel	XI.
Bosworth, Benijah	Bedstead sacking	XVII.
Botts, Charles T.	Straw-cutter	I.
Boyce, George D.	Stove, cooking	V.
Brainard, Jeremiah	Weigh locks	XII.
Branch, Hardin	Staves, blind slits, cutting	XIV.
Brayton, Wm. P., and James Hamilton	Dredging machines	IX.
Brittan, Ira W.	Carriage bodies, hanging	X.
Brown, Charles W.	Spinning hemp	III.
Brown, Samuel H.	Punching metal	II.
Buck, Darius	Stove, cooking	V.
Burling, Benjamin	Stump extracting	IX.
Burr, William G.	Tools for barrels	XIV.
Burt, Jonathan, and E. Smith	Shingles and barrel heads from steamed timber	XIV.
Burt, Jonathan, and E. Smith	Staves, cutting	XIV.
Bushnell, Horace	Stove valve.	V.
Butler, Thomas J.	Wheel hubs, cutting seats	X.
Butterfield, Elon B.	Fire-arms, many-chambered	XIX.
Button, Charles, and Harrison G. Dyar	Lead, white	IV.
Cannon, Francis A.	Rivets, making	II.
Card, Joseph, and G. Newell	Plough, coupling	I.
Carpenter, Daniel	Sleighs	X.
Carpenter, Daniel	Brick press	XV.
Carrel, John	Stirrups, saddle	H.
Cass, Moses G.	Harrows, revolving	I.
Chater, Nathaniel	Pigment, black, from anthracite coal	IV.
Cheney, Isaac	Brooms, metallic heads for	XVII.
Cherrington, Edmund	Bedstead sofa, raising	XVII
Cherry, George W.	Excavating earth	IX.
Chickering, Jonas, and others, assignees of A. Babcock,	Piano-forte	XVIII.
Clark, Edward	Lead, white, from oxide	IV.
Clark, Edward	Lead, white, from oxide	IV.
Clark, Patrick J.	Lamps, screw head	V.
Coffin, Isaac N.	Boilers, preventing explosion	VI.
Colt, Samuel	Fire-arms	XIX.
Conklin, Henry	Gin, cotton	III.
Conklin, Henry	Wool, burring	III.

Alphabetical List of expired patents.—Continued.

Patentees.	Inventions or discoveries.	Class.
Crum, Henry	Screws, heads and rivets, turning	II.
Cumston, William		
Currier, John H., and W. H. Taber	Drilling iron	II.
Curtis, Thaddeus B.	Ovens, portable	V.
Darricott, George, and Joseph Nason	Gas burners, argand	V.
Davenport, Moses	Horse-power	XIII.
Davis, Air	Cockstop	XI.
Davis, Air	Mitering and dovetailing	XIV.
Davis, George	Rake, hay and grain harrow	I.
Davis & Lord	Stove, cooking, anthracite	V.
Day, Moses	Spinning hemp, flax	III.
Day, Silas, and Samuel Hall	Fire-arms, gun-breech	XIX.
Dennison, John N., and Elias Kirkpatrick	Railroad track, cleaning	IX.
Denison, Lester E.	Corn-sheller	I.
Devine, James	Stove, cooking	V.
Dewey, Ebenezer	Bells, hanging and constructing	XVII.
De Witt, Richard V.	Boilers, steam	VI.
Dey, William B.	Truss for hernia	XX.
Dimpfel, Frederick P.	Furnace, revolving fan-wheel	II.
Dimpfel, Frederick P.	Furnace, consuming smoke, &c.	V.
Dinsmoor, Alonzo R.	Corn-sheller	I.
Dotterer, David H., and Thomas Jackson	Steam engine, locomotive	VI.
Drummond, John	Steam engine, rotary	VI.
Drummond, John	Inclined planes, ascending and descending	IX.
Dunn, Arthur	Soap manufacturing	IV.
Duntze, Henry	Latch, door	II.
Dutcher, Josiah	Plough	I.
Early, Thomas	Bedstead, attaching curtains	XVII.
Eastman, Phineas	Hammers and hatchets, sockets	II.
Edwards, David	Fire-arms	XIX.
Edwards, Lewis	Ink, supplying pens of ruling machine	XVIII.
Egleston, Warren	Currier's knife, sharpening	XVI.
Elliott, Thomas, jr.	Thrashing machine, &c.	I.
Ellsworth, Oliver	Flier and bobbin, twisting silk	III.
Else, Richard	Drying grain	V.
Ervin, Alfred	Winnowing machine, &c.	I.
Estes, Truman, and Warren Dutcher	Spinning cap, speeder for	III.
Evans, Britton M.	Railroad, chairs of	IX.
Evans, Cadwallader	Explosion of boilers, preventing	VI.
Evans, Wantsford	Wind-mill	XI.
Evarts, Russell	Ships, preventing dragging anchors	VII.
Farrand, Samuel E.	Wheels, carriage, hubbands for	X.
Ferre, Horace	Boot-crimps	XVI.
Ferren, Ebenezer	Flues, cooking-stove	V.
Fife, William	Pen-holder	XVIII.
Finney, Erastus	Lock, door	II.
Fish, Randal	Streets and roads, grading	IX.
Forrest, John M.	Seeding, planting machines	I.
Foster, Samuel W.	Smut machine	I.
Francis, Joseph	Boats, life and other	VII.
Freeman, Nathan	Carding machine, wool	III.
Friese, Philip C.	Boilers, preventing explosions	VI.
Galvin, Judson B.	Stoves, coal or wood	V.
Gaunt, Adin	Press, cheese	XII.
Gay, Gamaliel	Silk, twisting	III.
Gentry, Joseph C.	Mill spindles	XIII.
Germain, Lewis J.	Carriage, railroad	X.
Goodwin, John, jr,	Crimping leather, machine	XVI.
Goodyear, Chas., assignee of N. Haywood	Caoutchouc, manufacturing with sulphur	IV.
Grantham, Willis	Straw-cutter	I.
Grenville, Alonzo S., and T. J. Lewis	Blinds, window	IX.
Greenwood, John D., and R. W. Keene	Cement, artificial stove	IV.
Griggs, George S.	Brakes, safety, railroad cars	X.
Grimes, William C.	Smut machine	I.
Groff, William D.	Substitute for cigars, &c.	XXII.
Hague, John	Pencil-case, ever-pointed	XVIII.
Hale, Elisha	Umbrellas, &c.	XXI.
Hale, William H.	Boilers, preventing explosion	VI.
Hall, Elisha	Drilling, metallic and other substances	I.
Hall, William M.	Beehives	I.
Hamilton, James	Snags, sawing or cutting	IX.
Hammond, Sarah	Fireplace	V.
Hargreaves, James	Acid, sulphuric, manufacturing	IV.
Harrison, Thomas	Music, writing	XVIII.
Hart, John	Bedstead, tightening	XVII.
Hartwell, Isaac B.	Spinning wool	III.
Hatch, Franklin, and Jona. W. Terry	Springs, elliptical, carriages	X.
Haupt, Herman	Bridges, lattice	IX.
Hawkes, Charles W.	Press, cotton and hay	XII.

Alphabetical List of expired patents.—Continued.

Patentees.	Inventions or discoveries.	Class.
Haynes, Hezekiah	Rake, hay, teeth for	I.
Hebard, Nathaniel	Pulp, dressing	III.
Heinisch, Rochus	Shears, tailors, &c.	XXI.
Hemming, John, and Harrison G. Dyar	Soda, carbonate, manufacturing	IV.
Henry, William	Liquid, mode of evaporating	IV.
Herapath, William	Tanning	XVI.
Hewet, Henry W.	Screw wrench	II.
Hill, Luther and Aaron	Razor strop and case	XXI.
Hinman, Justus, John Thatcher, and Alonzo Palmer,	Shingles, cutting	XIV.
Hoffer, Samuel	Seeding, sowing grain, &c.	I.
Hopper, Thomas	Straw-cutter	I.
Hough, Milo B.	Churn	I.
House, Royal E.	Staves, sawing	XIV.
Hubbell, Moses, assignee of R. Hubbell	Boring timber	XIV.
Hunt, George	Wheel hubs, attaching to axles	X.
Hunt, Nathan and Caleb	Lock, door, latches	II.
Hutchinson, Enoch	Galley, ships, distilling salt water	V.
Isbel, Miladen M.	Window-blind fasteners	II.
Jackson, Charles H. L.	Spectacles, preparing the glasses	VIII.
James, George	Boats, life	VII.
Jennings, Isaiah	Composition for burning in lamps	IV.
Jenkins, Solomon M., M. D.	Cocooneries, lodgments in, &c.	III.
Johnson, Charles F., and J. J. Speed, jr.	Cocks, stop	XI.
Johnson, George M.	Hats, coloring	III.
Jordon, John W.	Plough, hill-side and horizontal	I.
Judkins, Eliza Ann B.	Loom, hand, weaving fringe	III.
Keagy, Abraham	Hulling clover seed, &c.	I.
Keen, Jeremiah B.	Boots and Shoes, cutting	XVI.
Kellogg, Jonathan D. (assignee of Justus Wright),	Cocks, molasses gate	XI.
Kenrick, Green (assignee of Wm. Dunbar)	Buttons, &c.	XXI.
Ketcham, Micah, and Wm. A. Wheeler	Flues of stoves	V.
Ketcham, Micah	Stoves, cooking	V.
Ketchum, William F.	Incline planes, &c., ascending, &c.	IX.
King, Henry	Fluid, blue, for writing	IV.
King, Sumner	Springs, elliptical	X.
Kingsley, J. Lemuel	Printing press	XVIII.
Kisinger, Samuel, H. and E. G. Stake	Corn-sheller	I.
Knight, William	Spark-arresters	VI.
Knight, Wm., A. L. Knight, & E. F. Condit	Paper making	III.
Lake, William	Canal locks, &c., sliding valves	IX.
Lamson, Ebenezer G.	Mowing, scythes to snaths, attaching	I.
Lathrop, John L.	Stoves, cooking	V.
Leavenworth, William	Propelling boats, &c.	VII.
Leavitt, Isaac, Adna Gilmore, and Wm. Sturtevant,	Washing-machine	XVII.
Lee, Philander	Drag for removing stones, &c.	IX.
Leibrich, Conrad	Lock and double catch bolts	II.
Leonard, Moses	Coffins, lodgments in, &c.	XXII.
Lewis, William and William H.	Boots, &c., heel plates for	XVI.
Long, Stephen H.	Bridges, wooden frame brace	IX.
Long, Stephen H.	Bridges, wooden frame suspension	IX.
Loudon, John, jr.	Wheel hubs, carriage, attaching to axles	X.
Maillard, Lucien	Boilers, steam, furnaces of, &c.	VI.
Mann, George, jr.	Smut-machine, cleaning grain	I.
Manuel, Joseph E.	Ice, mode of obtaining and securing	XXII.
Martineau, Eliza (administratrix of John Martineau, deceased),	Water-wheel	XI.
Mason, Benjamin F.	Crackers and biscuits, making and baking	XVII.
May, Oliver N.	Shingle, sawed, &c.	XIV.
Mercer, John	Corn-sheller and hulling grain	I.
Mercer, John	Incline planes, &c.	IX.
Merchant, Hiram R. and Orin G.	Seeding, planting corn	I.
Mettetal, G. D.	Sausages, making	XVII.
Miller, Hezekiah S.	Felt making, &c.	III.
Morgan, Jonathan	Saw, circular, &c.	XIV.
Morrall, Abel	Needles, manufacture of	II.
Mosely, Thomas W. H.	Pump, force, for wells, &c.	XI.
Myers, Samuel C.	Beehives	I.
McCollum, Elbridge	Stove, cooking	V.
McConnell, John	Teeth, key for extracting	XX.
McCord, Isaac	Wire rope, round flexible	II.
McCrea, Thomas	Smut-machine, for cleaning grain	I.
McIlroy, William, jr., and Wm. Boon	Corn-sheller	I.
McKeever, Matthew	Thrashing machine, &c.	I.
McMillen, Daniel C., and others	Shingles, cutting from steamed timber, &c.	XIV.
Naylor, Peter	Walls and ceiling, protecting from fire	IX.
Naylor, Peter	Roofs, covering with metal	IX.

Alphabetical List of expired patents.—Continued.

Patentees.	Inventions or discoveries.	Class.
Nevell, George J.	Springs, elliptical, setting and fitting	X.
Nickols, Edward, and James Augur	Furnaces, blacksmith, burning anthracite	II.
Nock, Joseph	Padlocks, &c.	II.
North, Linus	Flues of stoves	V.
Nott, Eliphalet	Stoves, coal, applied to furnaces	V.
Osgood, Jason C.	Wagons, &c., attaching boxes, &c.	X.
Otis, William S.	Excavating and removing earth, crane excavator for	IX.
Page, George	Boring earth, augur for	IX.
Palmer, Lewis R.	Hides, constructing rollers for pressing	XVI.
Parker, William R.	Corn-sheller	I.
Parsons, Ludlam M.	Shingles, cutting	XIV.
Parsons, Stephen	Water-wheel, reaction, moulding preparatory to casting	XI.
Parsons, Stephen	Shafts, vertical, &c., preventing friction	XIII.
Past, John C.	Railroad, self-adjusting	IX.
Patterson, Abram	Steam engine, &c., apparatus, &c.	VI.
Patterson, Thos. J., assignee of Wm. Coburn	Leather, rolling	XVI.
Pearce, Henry	Grist-mill	XIII.
Peck, Noble	Stove, cooking	V.
Pennell, William W.	Wheels, car, iron	X.
Penrose, N. R., and S. F. Palmer	Raising canal boats	VII.
Pepper, Hart	Staves, sawing	XIV.
Peters, Joseph P.	Pills, &c., counting	XXII.
Petitval, John B.	Boilers, steam furnaces of, &c.	VI.
Phipps, William R.	Cloth, napping and making waterproof	III.
Phleger, Leonard	Spark-arresters	VI.
Pike, Samuel	Barrels, vents for	XIV.
Poteet, Allran	Truss, for prolapsus uteri	XX.
Potter, William L.	Canal locks, wicket gates for	IX.
Pratt, Jacob	Reeling and spinning and twisting silk	III.
Rankin, Andrew	Hats, napping	III.
Reaney, Thomas, and John Naglee (Naglee, assignee of Reaney),	Spark-arresters	VI.
	Truss, for prolapsus uteri	XX.
Reynolds, William	Mortising, tenoning, and boring	XIV.
Richtmyre, B., and James H. Martin	Railroad, cleaning the rails, &c.	IX.
Ridgway, Thomas S.	Springs for railroad carriages	X.
Riley, Patrick	Stoves, cooking, Franklin	V.
Ring, Abner R.	Coffee-mill	XIII.
Rittenhouse, John	Railroad, chairs of	IX.
Robinson, Moncure	Seeding, planting corn, &c.	I.
Rockwell, David S.	Bedsteads, fastening	XVII.
Rodefer, Joseph	Stoves, cooking, valve of	V.
Root, Hiram	Water-wheel	XI.
Rose, Timothy	Furnace, smelting iron ore	II.
Roth, Augustus	Water-wheel, letting the water on	XI.
Ruble, Thomas	Boilers, steam, inverted arch	VI.
Salomon, John C. F.	Boot-crimp	XVI.
Sanderson, Joseph	Printing-press	XVIII.
Schnebly, William and Thomas	Excavating and removing earth, scraper for	IX.
Scholder, John	Mortar, preparing for the manufacture of bricks, &c.	XV.
Seely, Oran W.	Seeding, sowing seed	I.
Seward, Martin and Samuel L.	Forges, blacksmiths', producing blast	II.
Sharp, William and Heman W.	Boring posts, &c.	XIV.
Shay, William H.	Leather, stitching	XVI.
Sheldon, Samuel	Steam-engine, rotary	VI.
Sherman, Roger M.	Beehives	I.
Sholl, John	Coaches, &c.	X.
Shriver, Thomas	Tuyere, iron, blacksmiths'	II.
Shugert, John	Reel for chalk lines	III.
Sickels, Gerard	Straps for pantaloons	XXI.
Simpson, M. H.	Drilling rocks	IX.
Singer, Isaac M.	Truss for hernia	XX.
Sinton, John M.	Plough	I.
Small, William	Fire-arms	XIX.
Smith, Benjamin F.	Spectacles, revolving glass	VIII
Smith, Christopher H.	Stoves, cooking	V.
Smith, Elihu	Cultivator, corn	I.
Smith, John B.	Cultivator, garden	I.
Smith, John B.	Smut machine	I.
Smith, Leonard Smith, Robert	Riveting metallic plates for boilers	II.
Staples, William A.	Straw-cutter	I.
Starr, Nathan	Fire-arms	XIX.
Stearns, Charles	Pipes, earthen, for conveying water	XV.
Stevens, John H.	Matches, friction, composition, &c.	IV.
Stevens, John H.	Matches, friction, preventing accidental ignition	IV.
Stevens, John H.	Matches, friction, retaining fire	IV.
Stillman, William	Lock, door, safety	II.
Stimpson, James	Railroad, construction of	IX.

Alphabetical list of expired patents.—Continued.

Patentees.	Inventions or discoveries.	Class.
Stockman, Jacob and Samuel L. Hopper, assignees of G. W. Simons.	Pencil-case, ever-pointed	XVIII.
Sumner, Palmer, and Peter Naylor	Iron, protecting from oxidation	IV.
Swett, Samuel, jr.	Washing-machine	XVII.
Teall, Ansel	Clay and mortar, mixing, &c	XV.
Thaxter, Daniel	Spectacles, side-glass	VIII.
Thomson, John S.	Churn	I.
Tibbals, James	Oakum, making	III.
Tibbets, John G.	Dressing iron, &c.	II.
Tibbets, John G., (not George G. as in classification.)	Wheels, boxes, &c., applying anti-friction rollers to	X.
Tilghman, Edward	Railway bars, fastening	IX.
Tims, John H.	Wheels, boxes, &c.	X.
Tolles, Elisha	Wheels, carriage	X.
Tough, John S	Lamps, regulating the flame of	V.
Townsend, William W.	Press, cheese	XII.
Trask, Asa P., and Davis Aldrick	Mowing-machine	I.
Trumbull, Shadrach	Mill-stones, dressing	XIII.
Turbutt, Nicholas	Spark-arresters	VI.
Tyson, A. H	Kiln, lime	XV.
Urann, Richard	Mitering and dovetailing boards, &c.	XIV.
Vail, Stephen	Steam-engine, locomotive	VI.
Vail, Stephen	Jackscrew	XII.
Vallerchamp, Azima	Carriage bodies, hanging	X.
Van Pelt, H., and Benjamin Armstrong	Tin, &c., double-seaming	II.
Van Vorhes, Abraham	Pump, stone, &c.	XI.
Vaughn, J. C., and Frederick Leach	Pipes, casting and drawing lead	II.
Wagenor, David D	Grist-mill	XIII.
Walcott, Freeman. (See J. H. Hutchinson.).		
Walker, Cyrus	Brakes, &c.	X.
Walker, Luther B.	Smut-machine	I.
Webb, Augustus V. H.	Turpentine, oil of, rectifying	IV.
Webb, Augustus V. H.	Lamp, camphine	V.
Webb, Joseph W.	Mill, paint	XIII.
Wells, Ep. B., and Moses D	Rake, hay, revolving	I.
Wells, Horace	Coal-sifters	V.
West, Ammi	Power, manual, &c	XIII.
Wethered, John	Vice	II.
Whitcomb, Aaron	Tire-bending, &c	X.
White, George	Balance, &c.	XII.
White, Horace	Leather, splitting	XVI.
White, Josiah	Canal-lock, balance for	IX.
White, Lemuel B.	Mineral-water, soda-fonntain, &c.	IV.
White, Maunsel	Kettles, sugar, setting, &c	V.
Whitehead, Jesse	Cotton, roping	III.
Whiting, Ebenezer G.	Plough	I.
Whitney, Henry, and T. Leighton	Lamps, glass socket for	V.
Whitsilt, Charles	Saw, rotary, for cutting round tenons	XIV.
Whittemore, Jervice	Cock, molasses-gate	XI.
Whittemore, Wm., jr	Gin, cotton	III.
Willard, Benjamin F	Lights, revolving, &c	V.
Williams, Abel	Cutting potatoes, &c	XVII.
Williams, Daniel	Garments, instruments for measuring the human body, &c.	XXI.
Williams, John, jr.	Engine, fire	XI.
Williston and Arnold	Stoves, cooking, with elevated ovens	V.
Willson, Christian	Motion, double-acting, &c	XIII.
Willson, W. W., and C. Dickerman	Paper-sizing	III.
Wilton, Henry	Spark-arresters	VI.
Wilton, Henry	Bridges, construction of	IX.
Wise, John J.	Press, construction of	XII.
Wiswell, William W	Garments, cutting the bodies of coats in one piece	XXI.
Witherow and Pierce	Plough, mould-board of	I.
Wood, Thomas	Area of irregular figures, finding	VIII.
Wrightson, Jeremiah	Thrashing-machine, teeth for	I.
Wyman, Oliver	Grist-mill	XIII.
Yates, John B.	Smut-machine	I.
Young, Elisha W. and Thos. H. Wilson, (not Nelson, as in classification.)	Smut-machine	I.

Classified list of expired patents.—Continued.

Classified list of patents for Designs that have expired during the year 1853.

Designs.	Patentees.	Residence.	Date of patent.
Bathing-tubs	Jordan L. Mott	New York	Aug. 18, 1846.
Carpets and other fabrics	James D. Sparkman, assign. of Melville Kelsey	Williamsburgh; Brooklyn.	July 25, 1846; antedated March 23, 1846.
Carpets and other fabrics	James D. Sparkman, assign. of Melville Kelsey	Williamsburgh; Brooklyn.	July 25, 1846; antedated March 23, 1846.
Clock frames	Nath. Batchelor, assign. of Nath. Batchelor and Henry Biggins	New York	July 10, 1846.
Fountain, ornamental	John Dutton	Village Green, Pa.	Oct. 3, 1846.
Grate, fire-place	Adam Hampton	New York	July 25, 1846.
Grate, parlor	Adam Hampton	New York	July 10, 1846.
Grate, parlor	William and Nathan H. Jackson	New York	Jan. 7, 1846.
Spittoons	Henry Biggins	New York	Mar. 14, 1846.
Spoons, forks, &c.	Michael Gibney	New York	July 10, 1846.
Stoves	Alonzo L. Blanchard	Albany, N. Y.	July 25, 1846.
Stoves	Ames A. Lincoln	Norton, Mass.	Dec. 22, 1846.
Stoves	Augustus Quackenboss, assign. of Samuel W. Gibbs	Albany, N. Y.	Oct. 3, 1846.
Stoves	D. F. Goodhue and Chas. Guild	Cincinnati, Ohio	Aug. 18, 1846.
Stoves	Dunham, Sage, Jones, and Chollar, assigns. of Samuel Hanley	Troy, N. Y.	Oct. 10, 1846.
Stoves	Ezra Ripley	Troy, N. Y.	July 25, 1846; antedated May 23, 1846.
Stoves	Ezra Ripley	Troy, N. Y.	July 25, 1846; antedated May 23, 1846.
Stoves	Geo. W. and Henry Sizer	Springfield, Mass.	July 25, 1846; antedated Jan. 24, 1846.
Stoves	Geo. W. and Henry Sizer	Springfield, Mass.	July 25, 1846; antedated Jan. 24, 1846.
Stoves	Geo. M. Norton	Rochester, N. Y.	July 25, 1846.
Stoves	Jas. Wager	Troy, N. Y.	Oct. 10, 1846.
Stoves	John F. Seymour, assign. of Lucius O. Palmer	Utica, N. Y.	Oct. 10, 1846.
Stoves	John F. Seymour, assign. of Lucius O. Palmer	Utica, N. Y.	Oct. 10, 1846.
Stoves	John N. Wilder, Wm. E. Bleecker, and Samuel D. Vose, assigns. of Wm. Shaw	Albany, N. Y.	July 10, 1846.
Stoves	John S. and Merritt Peckham	Utica, N. Y.	Oct. 3, 1346.
Stoves	John S. and Merritt Peckham	Utica, N. Y.	Oct. 3, 1846.
Stoves	Johnson and Cox, assigns. of Ezra Ripley	Troy, N. Y.	Oct. 3, 1846.
Stoves	Lathrop S. Bacon	Le Roy. N. Y.	July 25, 1846.
Stoves	Robert A. Gregory	New York	Oct. 3, 1846.
Stoves	Robert Barber and Michael Hoffman	Bridgeton, N. J.	July 10, 1846; antedated May 18, 1846.
Stoves	Samuel D. Vose	Albany, N. Y.	Aug. 18, 1846; antedated June 1, 1846.
Stoves	Samuel D. Vose	Albany, N. Y.	Aug. 18, 1846; antedated June 1, 1846.
Stoves	Samuel D. Vose	Albany, N. Y.	Aug. 18, 1846; antedated June 29, 1846.
Stoves	Samuel D. Vose	Albany, N. Y.	July 25, 1846; antedated March 21, 1846.
Stoves	Samuel D. Vose	Albany, N. Y.	July 25, 1846; antedated March 21, 1846.
Stoves	Samuel D. Vose	Albany, N. Y.	July 25, 1846; antedated March 21, 1846.
Stoves	Sherman S. Jewett and Francis H. Root	Buffalo, N. Y.	Oct. 3, 1846.
Stoves	Sherman S. Jewett and Francis H. Root	Buffalo, N. Y.	Oct. 3, 1846
Stoves	W. and R. P. Resor	Cincinnati, Ohio	Oct. 10, 1846.

Stoves	Wm. Jackson	Syracuse, N. Y.	July 25, 1846.
Stoves	Wm. Jackson	Syracuse, N. Y.	July 25, 1846.
Stoves	Wm. P. Cresson, assign. of Wm. P. Cresson, David Stuart, and Jacob Beesley	Philadelphia, Pa.	July 25, 1846.
Stoves	Wm. P. Cresson	Philadelphia, Pa.	May 23, 1846.
Stoves	Wm. P. Cresson, assign. of Cresson, Stuart, Beesley, and Sailor	Philadelphia, Pa.	Oct. 3, 1846.
Stoves	Wm. Resor	Cincinnati, Ohio	May 23, 1846.
Stoves	John F. Rathbone	Albany, N. Y.	July 10, 1846.
Stoves, air-tight	John F. Rathbone	Albany, N. Y.	July 10, 1846; antedated April 20, 1846.
Stoves, box	John F. Rathbone	Albany, N. Y.	July 10, 1846; antedated April 20, 1846.
Stoves, box	Calvin Fulton	Rochester, N. Y.	Aug. 18, 1846.
Stoves, cooking	Jesse E. Potts, assign. of L. Gravline	Albany, N. Y.	July 10, 1846.
Stoves, cooking	John F. Rathbone	Albany, N. Y.	July 10, 1846.
Stoves, cooking	John Morrison	Troy, N. Y.	July 10, 1846.
Stoves, cooking	Peter Low	Troy, N. Y.	Oct. 10, 1846.
Stoves, cooking, air-tight	John F. Rathbone, assign. of John E. Thomas	Albany, N. Y.	July 10, 1846.
Stove plates	Wm. P. Cresson, assign. of Wm. P. Cresson, David Stuart, and Samuel H. Sailor	Philadelphia, Pa.	Oct. 24, 1846.
Stoves, parlor	C. Goodwin and W. Littlejohn	New York	Dec. 10, 1846; antedated Nov. 11, 1846.
Vases	John Bt. Clute	Schenectady, N. Y.	July 25, 1846.
Vases	W. and R. P. Resor	Cincinnati, Ohio	Oct. 10, 1846.

Alphabetical list of persons whose patents for designs have expired during the year 1853.

Patentees.	Designs.
Bacon, Lathrop S.	Stoves.
Barber, Robert, and Michael Hoffman	Stoves.
Biggins, Henry	Spittoons.
Biggins, Henry. (See Nathaniel Batchelor.)	
Blanchard, Alonzo L.	Stoves.
Bleecker, Wm. E. (See John N. Wilder.)	
Clute, John Bt.	Vases.
Cox. (See Johnson and Cox.)	
Cresson, Wm. P., assignee of Wm. P. Cresson, David Stuart, and Jacob Beesley	Stoves.
Cresson, Wm. P	Stoves.
Cresson, Wm. P., assignee of Cresson, Stuart, Beesley, and Sailor.	Stoves.
Cresson, Wm. P., assignee of Wm. P. Cresson, David Stuart, and SamuelH. Sailor.	Stove plates.
Dunham, A. T., B. H. Sage, E. Jones, and John B. Chollar, assignees of Sam. Hanley	Stoves.
Dutton, John	Fountain, ornamental.
Fulton, Calvin	Stoves, cooking.
Gibbs, Samuel W. (See Augustus Quackenboss.)	
Gibney, Michael	Spoons, forks, &c.
Goodhue, D. F., and Chas. Guild	Stoves.
Goodwin C. and W. Littlejohn	Stoves, parlor.
Gravline, L. (See Jesse E. Potts.)	
Gregory, Robert A.	Stoves.
Guild, Chas. (See D. F. Goodhue.)	
Hampton, Adam	Grate, fire-place.
Hampton, Adam	Grate, parlor.
Hanley, Samuel, (See Dunham, Sage, Jones, and Chollar.)	
Hoffman, Michael. (See Robt. Barber.)	
Jackson, William and Nathan H	Grate, parlor.
Jackson, William	Stoves.
Jackson, William	Stoves.
Jewett, Sherman S., and Francis H. Root	Stoves.
Jewett, Sherman S., and Francis H. Root	Stoves.
Johnson and Cox, assignees of Ezra Ripley	Stoves.
Kelsey, Melville. (See Jas. D. Sparkman.)	
Kelsey, Melville. (See Jas. D. Sparkman.)	
Lincoln, Ames A	Stoves.
Littlejohn, W. (See C. Goodwin.)	
Low, Peter	Stoves, cooking.
Morrison, John	Stoves, cooking.
Mott, Jordan L.	Bathing tubs.
Norton, Geo. M.	Stoves.
Palmer, Lucius O. (See John F. Seymour.)	
Palmer, Lucius O. (See John F. Seymour.)	
Peckham, John S. and Merritt	Stoves.
Peckham, John S. and Merritt	Stoves.
Potts, Jesse E., assignee of L. Gravline	Stoves, cooking.
Quackenboss, Augustus, assignee of Samuel W. Gibbs	Stoves.
Rathbone, John F	Stoves, air-tight.
Rathbone, John F	Stoves, box.
Rathbone, John F	Stoves, box.
Rathbone, John F	Stoves, cooking.
Rathbone, John F., assignee of John E. Thomas	Stoves, cooking, air-tight.
Resor, W. and R. P	Stoves.
Resor, W. and R. P	Vases.
Resor, William	Stoves.
Ripley, Ezra	Stoves.
Ripley, Ezra	Stoves.
Ripley, Ezra. (See Johnson and Cox.)	
Root, Francis H. (See Sherman S. Jewett.)	
Root, Francis H. (See Sherman S. Jewett.)	
Seymour, John F., assignee of Lucius O. Palmer	Stoves.
Seymour, John F., assignee of Lucius O. Palmer	Stoves.
Sizer, Geo. W. and Henry	Stoves.
Sizer, Geo. W. and Henry	Stoves.
Shaw, William. (See John N. Wilder and others.)	
Sparkman, James D., assignee of Melville Kelsey	Carpets and other fabrics.
Sparkman, James D., assignee of Melville Kelsey	Carpets and other fabrics.
Thomas, John E. (See John F. Rathbone.)	
Vose, Samuel D	Stoves.
Vose, Samuel D	Stoves.
Vose, Samuel D	Stoves.
Vose, Samuel D	Stoves.
Vose, Samuel D	Stoves.
Vose, Samuel D	Stoves.
Vose, Samuel D. (See John N. Wilder.)	
Wager, James	Stoves.
Wilder, John N., Wm. E. Bleecker and Sam. D. Vose, assignees of Wm. Shaw	Stoves.

CLASSIFIED LIST OF PATENTS GRANTED DURING THE YEAR 1853, WITH THE NAMES OF PATENTEES, PLACES OF RESIDENCE, AND DATE OF PATENTS.

CLASS I.—AGRICULTURE, *including instruments and operations.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Beehives	George Calvert	Upperville, Va	Nov. 1, 1853.
Beehives	Sylvester Davis	Claremont, N. H	July, 26, 1853.
Beehives	Wooster A. Flanders	Sharon, Vt	Oct. 25, 1853.
Cane and maize cutters	J. W. Cormack	Quincy, Ill	Nov. 1, 1853.
Churns, rotary	H. H. Grover	North Cohocton, N. Y	Nov. 15, 1853.
Cob and stalk cutters	Thos. B. Jones	Carleville, Ala	Oct. 11, 1853.
Corn-shellers	Eben L. Millis	Rochester Depot, Ohio	Aug. 9, 1853.
Corn-shellers	George W. Reid	Evansville, Ind	May 3, 1853.
Corn-shellers	Jeremiah P. Smith	Hummelstown, Pa	Jan. 18, 1853.
Corn-shellers	Levis H. Davis	Kennet Square, Pa	Sept. 6, 1853.
Corn-shellers	Porter Dickinson	Amherst, Mass	Sept. 6, 1853.
Cotton in the field, machine for topping	A. A. Dickson	Griffin, Ga	Oct. 4, 1853.
Cotton, stalk-cutters and pulverizers	George Gorman	Lamar, Miss	Sept. 20, 1853.
Cultivators	Philip H. Keck	Morgantown, Va	May 31, 1853.
Cultivators, bog-cutting	E. L. Freeman	Ann Arbor, Mich	June 21, 1853.
Cultivators, devices for steering	Seneca Lapham	Salem, Ohio	Nov. 1, 1853.
Cultivator, ploughs	Wm. S. Hyde	Townsend, Ohio	June 21, 1853.
Cultivators, rotary root-digging	Samuel Snow and Alexander Hine	Fayetteville, Lafayette, N. Y	Oct. 11, 1853.
Fork, dung, devices of a convertible	Ezra H. Dawes	Litchfield, Me	Oct. 25, 1853.
Forks, manure and other	Benjamin H. Franklin	Worcester, Mass	Dec. 20, 1853.
Grain-cradles	Christopher P. Kelsey	Livingstonville, N. Y	Nov. 1, 1853.
Grain-separators	J. V. A. Wemple	Chicago, Ill	Nov. 1, 1853.
Grain-separators, carriers to	John Blue	Covert, N. Y	Nov. 8, 1853.
Grain-separators, straw and	John A. Taplin	Fishkill, N. Y	Nov. 1, 1853.
Grain-washers	Geo. and Geo. W. Feaga	Frederick, Md	Jan. 4, 1853.
Harrows	William Berlin	Berryville, Va	April 12, 1853.
Harrows, the construction of	Lewis Lupton	Winchester, Va	May 24, 1853.
Harrow to a land-roller, attachment of a	Daniel Hill	Bartonia, Ind	Oct. 11, 1853.
Harvesters and binders	Joseph E. Neson	Buffalo, N. Y	Dec. 13, 1853; in England, Aug. 27, 1853.
Harvesters and binders, grain	P. H. Watson and E. S. Renwick	Washington, D. C	Dec. 6, 1853; antedated June 6, 1853.
Harvesters, clover	Jeptha A. Wagener	Pultney, N. Y	May 24, 1853.
Harvesters, cutter-fingers of	John H. Manny	Waddams Grove, Ill	April 19, 1853; in England, Dec. 9, 1852.
Harvesters, cutters to	John H. Manny	Waddams Grove, Ill	June 21, 1853; in England, Dec. 9, 1852.
Harvesters, grain	Frederick Nishwitz	Williamsburg, N. Y	Aug. 30, 1853.

Classified list of patents issued.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Harvesters, grain	Thos. D. Burrall	Geneva, N. Y.	April 5, 1853.
Harvesters, grain and grass	John E. Brown and S. S. Bartlett	Woonsocket, R. I.	Dec. 20, 1853.
Harvesters, grain and grass	Philo Sylla and Augustus Adams	Elgin, Ill.	Sept. 20, 1853.
Harvesters, grain and grass	Uriah H. Goble	Springfield, Ohio	Dec. 20, 1853.
Harvesters, grain and grass	William and Thomas Schnebly	New York, N. Y.	Dec. 20, 1853.
Harvesters, grain and grass, cutters of	William Pierpont	Salem, N. J.	Nov. 22, 1853.
Harvesters, grain and grass, cutting-gear of	Samuel S. Allen	Salem, N. J.	Nov. 8, 1853.
Harvesters, grass	William K. Hall	Phillippi, Va.	Nov. 22, 1853.
Harvesters of grain and grass	William G. Huyett	Williamsburgh, Pa.	June 14, 1853.
Harvesters, rakes to	Thos. Baylis and Daniel Williams	Tecumseh, Mich.	Jan. 11, 1853.
Harvesters, track-clearers to	Rufus L. Howard, assignee of Wm. F. Ketchum.	Buffalo, N. Y.	May 17, 1853.
Hoes, garden and other	Jacob T. Sargent	Sutton, N. H.	Oct. 25, 1853.
Hoes, seeding	Julius A. Pease	New York, N. Y.	May 17, 1853.
Hullers of grass-seed	Henry P. Byram	Louisville, Ky.	Oct. 11, 1853.
Hullers, rice	D. Marsh and B. Whitney	Fairfield, Conn.	April 26, 1853.
Hulling and scouring coffee, machines for	Robt. P. Walker	New York, N. Y.	Dec. 20, 1853.
Hulling-cylinders, clover, fastening the teeth to	Samuel Karns	Bloody Run, Pa.	Nov. 8, 1853.
Husking maize machines	Thomas C. Hargreaves	Schenectady, N. Y.	Oct. 4, 1853.
Manure-carts	Daniel Reid	Washington, N. C.	May 3, 1853.
Manure-crushers and sowers	Thomas F. Nelson	Clark Co., Va.	Dec. 20, 1853.
Manure-spreaders	Silas A. Hedges	Lancaster, Ohio	Jan. 11, 1853.
Planters, corn	Gardner A. Bruce	Mechanicsburg, Ill.	Oct. 4, 1853.
Planters, corn	Jacob H. Carothers	Davidsburg, Pa.	July 26, 1853.
Planters, cotton-seed	Samuel Miller	Washington College, Tenn.	April 19, 1853.
Planters, seed	David and Herman Wolf	Lebanon, Pa.	Feb. 15, 1853.
Planters, seed	George Rohr	Charlestown, Va.	June 21, 1853.
Planters, seed	Geo. W. Brown	Tylerville, Ill.	Aug. 2, 1853; antedated Feb. 2, 1853.
Planters, seed	Henry Perrin and Wm. Rudduck	Wilmington, Ohio	Sept. 20, 1853.
Planters, seed	Isaac H. Garretson	Richland, Iowa	Mar. 29, 1853.
Planters, seed	Lebbeus Caswell	Harrison, Me.	Aug. 2, 1853.
Planters, seed	Milton Satterlee	Louisa, Ill.	July 26, 1853.
Planters, seed	Nathan C. Davis	West Jefferson, Ohio	Oct. 25, 1853.
Planters, seed	Peter Horn	Hagerstown, Md.	Aug. 23, 1853.
Planters, seed	R. C. Wrenn	Mount Gilead, Ohio	Nov. 29, 1853.
Planters, seed	Samuel Witherow, assignee of Samuel and Wm. H. Witherow.	Gettysburg, Pa.	Jan. 18, 1853.
Planters, seed	Samuel Jenkins	Portsmouth, Pa.	Sept. 20, 1853.
Planters, seed	William Cressler	Shippensburg, Pa.	May 17, 1853.
Planters, seed, draught apparatus of	Jacob Mumma	Mount Joy, Pa.	Aug. 16, 1853.
Planting cultivators, seed	George Phillips	Philadelphia, Pa.	Nov. 15, 1853.
Ploughs	Cornelius R. Brinckerhoff	Batavia, N. Y.	Oct. 11, 1853.
Ploughs	Robert A. Graham	New Paris, Ohio	Oct. 4, 1853.

Ploughs	Samuel Hulbert	Ogdensburg, N. Y.	Sept. 20, 1853; in Canada, Sept. 20, 1852.
Ploughs	Solomon Horney, jr.	Richmond, Ind.	April 5, 1853.
Ploughs	William V. Burton	Orange, Ohio	July 26, 1853.
Ploughs, attaching horses to	John D. Filkins and Wm. H. De Puy	Lima, Ind.	Oct. 25, 1853.
Plough-beams	Levi B. Griffith	Honey Brook, Pa.	Oct. 4, 1853.
Ploughs, cultivating	Sam. G. Wise, assignee of L. M. Whitman	Weedsport, N. Y.	Oct. 11, 1853.
Ploughs, hill-side	D. H. B. Newcomb	Conewango, N. Y.	June 21, 1853.
Ploughs, hill-side	J. B. Wilder	Belfast, Me.	June 21, 1853.
Ploughs, hill-side	J. C. Bidwell and Jno. Hall, executors of Sam. Hall.	Pittsburg, Pa.	Jan. 4, 1853.
Ploughs, hill-side	Nathan Harrison and John W. H. Metcalf	Ridgeville, Va.	Oct. 11, 1853.
Ploughs, hill-side	William H. Babbit	Waynesburg, Pa.	Aug. 16, 1853.
Potatoes, cutting and planting	Samuel Hutchinson	Rockport, Ind.	Oct. 25, 1853.
Potato-diggers	Francis C. Schaffer	Brooklyn, N. Y.	Jan. 4, 1853.
Potato-diggers	Thomas B. Stout	Keyport, N. J.	April 26, 1853.
Rakes, hay	Frederick B. Parker	Queensville, Ind.	Aug. 23, 1853.
Rakes, power	Hiram N. Tripp	Alfred, Maine	Dec. 20, 1853.
Scythe-fastenings	Alpheus Kimball	Fitchburg, Mass.	Feb. 22, 1853.
Scythe-fastenings	Pinckney Frost	Springfield, Vt.	Jan. 11, 1853.
Scythes, shape of	Wm. P. Greenleaf	Washington, N. H.	Sept. 13, 1853.
Straw-cutters	James T. Asbury	Taylorville, N. C.	Sept. 6, 1853.
Straw-cutters	J. J. Parker	Marietta, Ohio	Oct. 11, 1853.
Straw-cutters	John Moyle	Martinsburg, Va.	Sept. 6, 1853.
Straw-cutters	O. W. Seely, assign. of J. P. Smith & O. W. Seely	Albany, N. Y.	July 12, 1853.
Straw-cutters	Reuben Daniels	Woodstock, Vt.	April 26, 1853.
Straw-cutters	Richard Ketchum	Seneca Castle, N. Y.	Oct. 4, 1853.
Straw-cutters	Thomas Allison	Milton, N. Y.	Sept. 6, 1853.
Straw-cutters, cutting-gear of	John Jones and Alex. Lyle	Rochester, N. Y.	Nov. 8, 1853.
Straw-cutters, feed-rollers of	Robert Sinclair, jr., and R. F. Maynard	Baltimore, Md.	Nov. 15, 1853.
Threshers and separators, grain	Abram B. Peterson	Dexter, Mich.	Nov. 8, 1853.
Threshers and separators of grain	Napoleon B. Lucas	Otter Creek, Ill.	June 28, 1853.
Vegetable-cutters	D. H. Whittemore	Chicopee Falls, Mass.	Oct. 11, 1853.
Winnowers	D. S. Mackey and J. R. Smith	Batavia, N. Y.	Oct. 25, 1853.
Winnowers	Lewis S. Ingraham	Cuyahoga Falls, Ohio	Aug. 9, 1853.
Winnowers and Threshers	Geo. F. S. Zimmerman	Charlestown, Va.	Feb. 8, 1853.
Winnowers, grain	George B. Salmon	Elmira, N. Y.	July 19, 1853; antedated July 6, 1853.
Winnowers of grain	Augustus B. Childs	Rochester, N. Y.	Jan. 25, 1853; in England, May 22, 1852.
Winnowers of grain	Henry M. Keller	Newark, Ohio	Oct. 11, 1853.
Winnowers of grain	Samuel Canby	Ellicott's Mills, Md.	Aug. 9, 1853.
Winnowers of grain	Schuyler Briggs and Jno. G. Talbot	Sloansville, N. Y.	Mar. 29, 1853.
Winnowers, screens of	Ab. Lash and Miles Moore	Belleville, Ohio	Nov. 8, 1853.
Winnowers, shaking shoes for	Jacob L. Van Valkenburgh	Ogdensburg, N. Y.	Oct. 11, 1853.
Winnowers, shoes to	Joseph and James Montgomery	Lancaster, Pa.	Dec. 20, 1853.
Yokes, ox	Albert Vose	Pittsfield, Vt.	Oct. 25, 1853; antedated Aug. 10, 1853.

Classified list of patents issued.—Continued.

Class II.—Metallurgy *and manufacture of metals and instruments therefor.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Annunciators for hotels. (See Class XXII.)			
Anvils, apparatus for polishing	M. Fisher and John H. Norris	Trenton, N. J	Oct. 4, 1853.
Auger handles and braces, socket for. (See Class XIV.)			
Axes, machine for making	Jonas Simmons	Cohoes, N. Y	Mar. 1, 1853.
Axes, pick	D. and D. F. Tompkins, assignees of J. C. Conklin	New York, N. Y	Dec. 20, 1853.
Beams, sheet-metal	Elizabeth Montgomery, assignee of Richard Montgomery.	New York, N. Y	July 12, 1853; in England, Oct. 13, 1852.
Bolts, knob, operating and locking	Oliver Ellsworth	Hartford, Conn.	June 7, 1853.
Bolts, window shutter	S. Green and C. Arnett, assignees of Sam. Green.	Lambertville, N. J	Nov. 8, 1853.
Burglar alarms. (See Class XXII.)			
Cable-chain stopper. (See Class VII.)			
Casting pipes, core-bars for forming cores of	George Peacock	West Troy, N. Y.	Feb. 8, 1853.
Castors for furniture	William W. Wade	Springfield, Mass.	May 17, 1853.
Chains, making	Christian Sleppy	Wilkesbarre, Pa.	Sept. 27, 1853.
Curry-combs, construction of	William Wheeler	Troy, N. Y.	Mar. 1, 1853.
Curry-combs, cutting the bars and teeth of	Chas. H. Kellogg, assign. of William Wheeler	Troy, N. Y., West Poultney, Vt.	Oct. 25, 1853.
Dies, block, cleansing and cooling in rivet machines	Davis L. Weatherhead	Philadelphia, Pa.	May 17, 1853
Discs, metallic, machinery for cutting and bending	Roys & Wilcox, assignees of Elliot Savage	Berlin, Ct.	Aug. 30, 1853.
Door-fastener	Duncan E. McDougall	Troy, N. Y.	May 31, 1853.
Door-fastener	Samuel P. Kittle	Buffalo, N. Y.	June 7, 1853.
Drills, expanding	Thomas Prosser	New York, N. Y	Jan. 25, 1853.
Drills, metal	Warren Lyon	New York, N. Y	Sept. 20, 1853.
Fastener and holder, window-shutter	Calvin Adams	Pittsburg, Pa.	Oct. 25, 1853.
Files and Rasps	Hiram Powers	Now of Florence, Italy	Oct. 4, 1853.
Gold amalgamator, arrangement of quartz pulverizer and	P. G. Gardiner	New York, N. Y.	June 7, 1853.
Gold, machines for pulverizing auriferous quartz and amalgamating the.	Hiram Berdan	New York, N. Y.	May 24, 1853.
Gold, magnetic machine for washing and separating. (See Class VIII., M.)			
Gold, processes for preparing (for filling teeth)	Alfred J. Watts	Utica, N. Y.	April 26, 1853.
Gold separator	M. C. Gritzner	Washington, D. C.	Nov. 29, 1853.
Gold washer	Henry M. Ritterband	New York, N. Y.	Nov. 1, 1853.
Gold washer	John H. Ward	Sonora, Cal.	Oct. 4, 1853.
Gold washer and amalgamator	Abiather F. Potter	Boston, Mass.	Jan. 25, 1853.
Gold washer and amalgamator	Jno. D. Lynde, assignee of Arnold Buffum	New York, N. Y.	May 31, 1853.
Grinding plough-castings, machine for	Joshua Gibbs	Canton, Ohio	Oct. 4, 1853.
Hammers, drop	E. K. Root	Hartford, Conn.	Aug. 16, 1853.
Hammers, machine	Daniel Noyes	Abington, Mass.	Oct. 25, 1853.
Hammers, steam, arrangement of valves, ports, and passages for operating.	Robert R. Taylor	Reading, Pa.	Nov. 29, 1853.

Hammers, steam, valve arrangement for	James Watt	South Boston, Mass.	Dec. 6, 1853.
Hammers, trip	John W. Peer	Schenectady, N. Y.	Nov. 29, 1853.
Hammers, trip	Wm. Van Anden	Poughkeepsie, N. Y.	Aug. 16, 1853.
Hooks and eyes to cards, attaching. (See Class XXI., H.)			
Iron, covering with gutta percha. (See Class IV., G.)			
Iron, malleable, directly from the ore, manufacturing	Geo. A. Whipple	Newark, N. J.	May 10, 1853.
Iron, railroad and other, rolling. (See rolling.)			
Iron, sheet, manufacture of	Henry McCarty	Pittsburg, Pa.	Sept. 27, 1853.
Iron ware, hollow, annealing	David Stuart	Philadelphia, Pa.	Sept. 27, 1853.
Keys, swivel-nibbed, for door-locks	Augustus C. Harig	Louisville, Ky.	Mar. 1, 1853.
Knives, table, attaching handles to the blades of	David N. Ropes	Meriden, Ct.	Nov. 29, 1853.
Locks, bank	James H. Crygier	New York, N. Y.	Nov. 22, 1853.
Locks, bank	Linus Yale, jr.	Newport, N. Y.	July 12, 1853.
Locks, bank	Thomas P. Murphy	New York, N. Y.	May 31, 1853.
Locks, door	Linus Yale	Newport, N. Y.	Oct. 18, 1853.
Mandrel, revolving, for lining cylinders with metal	George Potts	Cincinnati, Ohio	Sept. 13, 1853.
Metal bars, machinery for reducing	Cyrus G. Howard, assignee of Dexter H. Chamberlain.	Boston, Mass.	Jan. 18, 1853.
Metal, coating sheets of	Edmund Morewood and Geo. Rogers	London, England	Nov. 1, 1853.
Metal, sheet, machine for cutting	Stephen P. Ruggles	Boston, Mass.	Aug. 30, 1853.
Metal, sheet, machines for cutting	Jno. Wilmington	South Bend, Ind.	Dec. 13, 1853.
Metals, apparatus for grinding and shaping	Samuel Darling	Bangor, Me.	Aug. 30, 1853.
Metals, planing machines for	Wm. W. Spafford	Boston, Mass.	Sept. 6, 1853.
Metals, treating, while in the molten state	Horace W. Woodruff	Watertown, N. Y.	Oct. 11, 1853.
Metallic plates, joining and riveting	William Beschke	Alexandria, Va.	Nov. 22, 1853.
Metallic trunk frames. (See Class XVI., T.)			
Moulding for cast-iron plates with dove-tailed recesses	Thaddeus A. Smith	Albany, N. Y.	Mar. 8, 1853.
Moulding in flasks, machines for	Lysander A. Orcutt	Albany, N. Y.	Mar. 8, 1853.
Nails, screw. (See Screw-nails.)			
Nails, wrought, machines for making	John P. Sherwood	Fort Edward, N. Y.	May 10, 1853.
Nut-machines	Henry Carter and James Rees	Pittsburg, Pa.	Nov. 22, 1853; antedated June 3, 1853.
Ore-washer	M. Peckham and L. O. Palmer	Utica, N. Y.	Jan. 4, 1853.
Ores, machines for washing	Richard Edwards	Eagle River, Mich.	Nov. 29, 1853.
Ores, or other substances of different specific gravities, apparatus for separating.	H. Bradford and E. Fitzgerald	New York, N. Y.	Feb. 22, 1853.
Padlock	S. C. Thompson, G. W. Westerfield, and H. Ritchie, assignees of H. Ritchie.	Newark, N. J.	Aug. 23, 1853.
Pins, machines for sticking	C. O. Crosby	New Haven, Conn.	Nov. 1, 1853.
Pins, machines for sticking	C. O. Crosby	New Haven, Conn.	Nov. 1, 1853.
Pins, machines for sticking	C. O. Crosby	New Haven, Conn.	Nov. 1, 1853.
Planing metal, machines for. (See Class XIV.)			
Printers' rules, machines for cutting and bevelling. (See Class XVIII.)			
Punching metal, machines for	O. J. Davie and Thos. W. Stephens	Erie, Pa.	Oct. 4, 1853.
Rolling iron, bar, machines for	Jas. T. Hartupee and A. Alexander	Pittsburg, Pa.	April 19, 1853.
Rolling railroad and other iron	A. B. Seymour	Hudson, N. Y.	Aug. 9, 1853.
Sash-fastener	Henry Hochstrasser	Philadelphia, Pa.	Sept. 27, 1853.
Sash-fasteners, arrangement of	Henry R. Noll	Lewisburg, Pa.	April 5, 1853.
Saw-setting machine	Rand B. White	Mendon, N. Y.	Feb. 15, 1853.
Saws, mill, forming teeth on. (See Class XIV.)			

Classified list of patents issued.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Screw-blanks, machines for pointing and threading	Thomas J. Sloan	New York, N. Y	April 26, 1853.
Screw-blanks, machinery for shaving the heads of	New England Screw Company, assignee of Cullen Whipple.	Providence, R. I.	April 12, 1853; antedated Nov. 30, 1852.
Screw-blanks, machines for threading	Thompson Newbury	Taunton, Mass.	April 19, 1853.
Screw-cutting dies	John Griffiths	Philadelphia, Pa.	Jan. 18, 1853.
Screw-cutting dies, arrangement of	Andrew Mayer	Philadelphia, Pa.	Jan. 11, 1853.
Screw-cutting dies in the die-stock, arrangement of	Simeon Goodfellow	New Orleans, La.	Dec. 6, 1853.
Screw-machines, apparatus for feeding blanks to	Thompson Newbury	Taunton, Mass.	April 5, 1853.
Screw-nails	Samuel Pratt	Boston, Mass.	Oct. 25, 1853.
Screw-wrench	Aury G. Coes	Worcester, Mass.	Aug. 16, 1853.
Screw-wrench	George B. Read	New York, N. Y	Feb. 1, 1853.
Screws, wood, machine for cutting the threads of	Elliot Savage	Berlin, Conn	April 5, 1853.
Screws, wooden, machines for cutting	Abner H. Longley	Lebanon, Ind.	May 17, 1853.
Shoes, horse	Wm. H. Towers	Philadelphia, Pa	Dec. 20, 1853.
Shoes, horse, expanding	Benjamin P. Sargent	Sutton, N. H	Oct. 25, 1853.
Shovel blades, uniting to the handle-straps	Jonathan White	Antrim, N. H	Nov. 15, 1853.
Shovels, spades, &c., making	William W. Richards	Philadelphia, Pa.	Oct. 25, 1853.
Spike-machines	Philip P. Trayser	Baltimore, Md.	July 19, 1853.
Spike-machines, adjustable heading-lever in	Joshua C. Cary	Richmond, Va.	Feb. 15, 1853.
Spike-machines, arrangement of the die-rollers in	James H. Swett	Boston, Mass	Mar. 29, 1853.
Spikes, machines for making	J. R. Richardson, J. Westerman, and E. Wilder	Newcastle, Pa.	Aug. 2, 1853.
Spikes, hook-headed, machines for making	John H. Snyder	Troy, N. Y.	May 10, 1853.
Steel to cast-iron, moulds for uniting	Charles Peters	Trenton, N. J	Feb. 8, 1853.
Tubes, metal, manufacture of	Geo. Frederick Muntz, jr.	Birmingham, England	June 14, 1853; in England, May 8, 1852.
Zinc, coating with lead	E. Morewood and G. Rogers	London, England	June 28, 1853; in England, Dec. 12, 1850.

Class III.—Manufactures of fibrous and textile substances, *including machines for preparing fibres of wool, cotton, silk, fur, paper, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Bobbins	Horatio Clarke	Dedham, Mass.	June 28, 1853.
Cards, machine-cleaning	George Wellman	Lowell, Mass	Dec. 6, 1853.
Carpets, printed	Thomas Crossley	Roxbury, Mass	Aug. 16, 1853.
Cloth, bucking	Andrew Robeson, jr	Newport, R. I.	Sept. 13, 1853; in England, Nov. 8, 1852.

Cloth-dressing, gig-mills for	Amasa Woolson	Springfield, Vt.	April 19, 1853.
Condensers, wool	James S. Hogeland	Lafayette, Ind	Jan. 18, 1853.
Counterpanes	Zachariah Allen	Providence, R. I	Aug. 23, 1853.
Fabrics, bleached, processes for declorinating	J. Augustus Roth	Philadelphia, Pa	Oct. 4, 1853.
Fabrics, manufacture of plain and figured	Fred. Wm. Norton	Lasswade, North Britain	Sept. 18, 1853.
Fibre, vegetable, processes for preparing	Charles J. Pownall	Addison Road, Kensington, England	April 5, 1353; in Ireland, Aug. 11, 1852.
Fibrous materials, combing	Joshua Heilmann, administrator of Joshua Heilmann.	France	Nov. 29, 1853; in France, Dec. 17, 1845.
Flax, machines for breaking and dressing	S. A. Clemens	Springfield, Mass	Mar. 8, 1853.
Flyers, compressors for	Wm. H. Thompson and Richard H. Plummer	Biddeford, Me	July 19, 1853.
Gins, cotton	Henry L. Weeks	Hannahatchie, Ga	Sept. 6, 1853.
Hackling flax and hemp, machines for	James P. Arnold	Louisville, Ky	Jan. 4, 1853.
Hat bodies, conductors in machines for forming	Lansing E. Hopkins	New York, N. Y	Aug. 30, 1853.
Hat bodies, machines for shrinking	James S. Taylor	Danbury, Conn	May 3, 1853.
Hemp and flax, breaking-machines	O. S. Leavitt	Maysville, Ky	Aug. 30, 1853.
Hemp and flax, drawing-frames for	O. S. Leavitt	Marcellus, N. Y	Sept. 20, 1853.
Hemp-brakes	O. S. Leavitt	Marcellus, N. Y	Sept. 20, 1853.
Hemp, machines for breaking	Lewis W. Colver	Louisville, Ky	Mar. 29, 1853.
Knitting-looms	John Mee, John Rourke, and Gilbert MacKennon, assignees of John Mee.	Lowell, Mass.; Portsmouth, N. H.	May 10, 1853.
Knitting-machines	John Maxwell	Galeville, N. Y	Mar. 29, 1853.
Knitting-machines	M. Marshall, W. Aldrich, and L. B. Ting, assignees of Moses Marshall.	Lowell, Mass	Mar. 15, 1853.
Knitting-machines	William Mansfield	Dracut, Mass	Mar. 22, 1853.
Looms	Jonathan Knowles	Cohoes, N. Y	Nov. 8, 1853.
Looms	Oliver A. Kelly	Woonsocket, R. I	Nov. 22, 1853.
Looms	William Townshend	Hinsdale, Mass	Mar. 1, 1853.
Looms	William Townshend	Hinsdale, Mass	Nov. 15, 1853.
Looms for making weavers' harness	Kasimer Vogle	Chelsea, Mass	Oct. 25, 1853.
Looms for weaving coach-lace	James H. Murrill	Richmond, Va	Oct. 4, 1853.
Looms for weaving fancy goods	Benjamin F. Rice	Clinton, Mass	Oct. 18, 1853.
Looms for weaving haircloth	Halvor Halvorson	Hartford, Conn	Sept. 27, 1853.
Looms for weaving pile fabrics	E. B. Bigelow	Clinton, Mass	Nov. 15, 1853.
Looms, hand	James A. Mitchell	Ringgold, Ga	Dec. 20, 1853.
Looms, jacquard, apparatus of	John A. Elder	Westbrook, Me	June 21, 1853.
Looms, jacquard, harness-boards for	Edward Everett and Sam'l T. Thomas	Lawrence, Mass.; Lowell, Mass	Jan. 18, 1853.
Looms, let-off motion for	Amos B. Taylor and Stephen Wilcox, jr	Mystic, Conn.; Westerly, R. I	Feb. 22, 1853.
Looms, machines for manufacturing harness for	Darius C. Brown	Lowell, Mass	Feb. 15, 1853.
Looms, operating the treadles of	Robert W. Andrews	Stafford, Conn	Jan. 18, 1853.
Looms, power	James Greenhalgh, jr	Waterford, Mass	Nov. 8, 1853.
Looms, power	John Gledhill	New York, N. Y	Nov. 15, 1853.
Looms, power	John J. Hepworth, assignee of Wm. Baird	Spring Garden, Pa	Nov. 29, 1853.
Looms, power	John Pender	Worcester, Mass	Oct. 18, 1853.
Looms, power	William Mason	Taunton, Mass	Oct. 18, 1853.
Looms, power, shuttle-motions for	William Creighton	Fall River, Mass	Oct. 18, 1853.
Looms, shuttle-box motion in	Christopher Duckworth	Thompsonville, Conn	June 28, 1853.
Looms, temples for	Jerome B. Greene	Worcester, Mass	Nov. 8, 1853.
Looms, temples for	Jos. A. Scholfield	Westerly, R. I	Aug. 2, 1853.
Paper, copying, manufacturing	William Mann	Philadelphia, Pa	Jan. 11, 1853; antedated July 11, 1852.

Classified list of patents issued.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Paper, method of drying	John Hartin	New York, N. Y	Aug. 9, 1853.
Paper stuff, manufacture of. (See Class IV.)			
Sewing-machines	N. Hunt, assignee of Henry Edwards, assignee of C. Morey, assignee of S. C. Blodgett.	Boston, Mass	Dec. 20, 1853.
Sewing-machines	Thomas C. Thompson	Ithaca, N. Y	Mar. 29, 1853.
Sewing-machines	Wm. G. Bates, assignee of Wm. H. Johnson	Westfield, Mass.; Greenville, Mass.	Feb. 22, 1853.
Sewing-machines	William Wickersham	Lowell, Mass	April 19, 1853.
Sewing-machines, feed-motion in	Freeman Palmer	Conneaut, Ohio	Jan. 25, 1853.
Sewing-machines, feeding-clamps for	William H. Johnson	Granville, Mass	April 12, 1853.
Sewing on binding, guides for	Henry L. Sweet	Foxborough, Mass	Dec. 20, 1853.
Shuttles	David Carroll	Baltimore, Md	Dec. 20, 1853.
Spinning-jacks	John Jackson	Andover, Mass	July 19, 1853.
Stamping patterns on rollers, machines for. (See Class XVIII.)			
Warp net fabrics	John Mee, John Rourke, and Gilbert MacKennon, assignees of John Mee.	Lowell, Mass.; Portsmouth, N. H.	May 10, 1853.
Weaving corded fabrics	William Smith	New York, N. Y	April [illegible], 1853.
Willowers, feed-motion in	Francis A. Calvert	Lowell, Mass	April 19, 1853.
Yarn, process of forming by felting	John H. Bloodgood	Rahway, N. J	April 5, 1853.

CLASS IV.—CHEMICAL PROCESSES, MANUFACTURES, AND COMPOUNDS, *including medicines, dyeing, color-making, distilling, soap and candle making, mortars, cements, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Alcohol, processes for purifying	Luther Atwood	Boston, Mass	Aug. 23, 1853.
Alcohol, separating from water and other heavier fluids	B. F. Greenough	Cincinnati, Ohio	Dec. 20, 1853.
Benzole vapor apparatus	Oliver P. Drake	Boston, Mass	Aug. 30, 1853.
Candle-mould apparatus	George Kendall	Providence, R. I	May 3, 1853; in England, Nov. 12, 1852.
Candle-mould machines	D. E. and M. Battershall	Troy, N. Y	Dec. 20, 1853.
Caoutchouc compounds, processes of vulcanizing	L. O. P. Meyer	Newtown, Conn	Dec. 20, 1853.
Cementing materials for ornamental compounds	Conrad Poppenhusen, assignee of Carl Ludwick Gran.	Brooklyn, N. Y.; Hamburg, Germany	April 26, 1853; in Germany, Dec. 18, 1847.
Chromates, processes for obtaining	James C. Booth	Philadelphia, Pa	July 19, 1853; antedated Nov. 9, 1852.

Compositions for a filter	James M. Parker, assignee of Eliza Millington, executrix, and William S. Toole, executor, of Charles Millington and John Jordan, assignee of William H. Jennison.	New York, N. Y.	May 31, 1853.
Compounds for stereotype plates. (See Class XVIII., S.)			
Compositions for treating wool	W. S. Hubbell and A. Barrett	Kingsville, Ohio	June 7, 1853.
Dyeing compounds	Frederick G. Vettercke	New York, N. Y	July 26, 1853.
Dyeing yarn particolored	Daniel B. Hinman	Philadelphia, Pa	July 26, 1853.
Evaporators, cane-juice	Henry Bessemer	Middlesex County, England	Mar. 8, 1853; in England, Feb. 24, 1852.
Fabrics, bleached, processes for declorinating. (See Class III.)			
Fatty materials, purifying	Jean Baptiste Moinier and Pierre Hippolyte Boutigny.	Paris, France	Feb. 8, 1853; in France, Nov. 14, 1849.
Fibre, vegetable, processes for preparing. (See Class III.)			
Filters, for cane-juice	Henry Bessemer	Middlesex County, England	Mar. 8, 1853; in England, Feb. 24, 1852.
Gas-apparatus, portable	Wm. and Matthias Stratton	Philadelphia, Pa	Feb. 1, 1853.
Gas generators, feed-apparatus	Stephen Meredith	Erie, Pa	Sept. 6, 1853.
Gas meters	Alexander A. Croll	London, England	Feb. 22, 1853.
Gas meters	E. R. Hallam, assignee of E. R. Hallam and T. B. Barnard.	New Haven, Conn.; New Haven, Conn.; Brooklyn, N. Y.	Feb. 8, 1853.
Gas, purifying apparatus for	William Wigston	New York, N. Y	Aug. 30, 1853.
Glue, processes for making	David A. James	Cincinnati, Ohio	July 26, 1853.
Gutta percha and caoutchouc, covering metals with	Charles Goodyear	New Haven, Conn	Oct. 11, 1853; in England, Mar. 4, 1851.
Gutta percha and india-rubber manufacturing	C. Goodyear, assignee of Charles Goodyear and Robert Haering.	New Haven, Conn	April 12, 1853; in England, Mar. 4, 1851.
Gutta percha, moulding stereotypes plates. (See Class XVIII., S.)			
Gutta percha, stereotype compositions	Leonardo Westbrook	New York, N. Y	July 19, 1853.
India-rubber, manufacture of	Richard Solis	New Brunswick, N. J.	Feb. 1, 1853.
India-rubber, preserving in the liquid state	S. T. Armstrong, assignee of Henry Lee Norris	New York, N. Y	July 26, 1853; in England, Feb. 24, 1853; in France, Mar. 13, 1853.
India-rubber soles for boots and shoes. (See Class XVI., B.)			
Ink, printers'	Samuel H. Turner	Brooklyn, N. Y	Sept. 6, 1853.
Oil, paraffine, preparing	William Brown	Glasgow, Scotland	Sept. 27, 1853.
Oil, rosin, manufacturing	Samuel W. Hawes	Boston, Mass	April 12, 1853.
Oil, rosin, processes for distilling	James Riley and Wm. Allen	Southfield, N. Y	Mar. 22, 1853.
Oil, rosin, processes for distilling	Samuel W. Hawes, assignee of Madison Page	Chelsea, Mass.; Williamsburgh, N. Y	May 24, 1853.
Oil, rosin, purifying	Proprietors of Locks and Canals on Merrimack River, assignees of Samuel L. Dana.	Lowell, Mass	April 19, 1853.
Oils, lubricating, preparing	Luther Atwood	Boston, Mass	Mar. 29, 1853.
Paint compounds	Charles F. Sibbald	Philadelphia, Pa	May 10, 1853; in England, April 15, 1852.
Painting on cloth	Leon Jarosson	Jersey City, N. J	June 7, 1853.
Paper stuff, manufacture of	Theodore Coupie and M. A. C. Mellier	Paris, France	Aug. 2, 1853; in France, May 7, 1851.
Seidlitz powders, machine for folding. (See Class XXII., F.)			
Soap-cutting machines	James B. Duff	New York, N. Y	Aug. 23, 1853.
Soap ingredients	Ira F. Payson	New York, N. Y	Dec. 6, 1853.
Soda fountains	William Coughlan	Baltimore, Md	Oct. 4, 1853.

Classified list of patents issued.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Soda-water fountains	Alex. Frankenberg	Columbus, Ohio	Dec. 20, 1853.
Stills, condensers for	Carl E. Werner	Newcastle, Ill	Dec. 6, 1853.
Stone, artificial	Julius Hornig and Ludwig Suess	Union Hill, N. J.	June 7, 1853.
Sugar-cane juice, machines for expressing	Henry Bessemer	Middlesex County, England	Mar. 15, 1853; in England, Feb. 24, 1852.
Sugar drainers	Henry Bessemer	Middlesex County, England	April 26, 1853; in England, Feb. 24, 1852.
Sugar-draining machines	Horace Southmayd, assignee of Josiah W. Archbald.	New York, N. Y.; Porto Rico, West Indies.	Jan. 25, 1853.
Sugar syrup, heaters for	Henry Bessemer	Middlesex County, England	Mar. 15, 1853; in England, Feb. 24, 1852.
Zinc, coating with lead. (See Class II.)			

CLASS V.—CALORIFICS, *comprising lamps, fireplaces, stoves, grates, furnaces for heating buildings, cooking apparatus, preparation of fuel, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Candlesticks, iron, construction of	W. P. Merriam, N. C. Harris, Wm. Wheeler, and E. N. Merriam.	Poultney, Vt.	April 26, 1853.
Candlesticks, press-mould	Samuel T. Barnes	Columbus, Ohio	July 19, 1853.
Cars, oil or fluid	James R. Nichols	Haverhill, Mass.	Sept. 20, 1853.
Dust, excluding from railroad cars	James M. Cook	Taunton, Mass.	April 19, 1853.
Fire-places and stoves	Charles Neer	Troy, N. Y.	May 31, 1853.
Furnaces, hot-air	C. D. Yale, assignee of James Bolton	Richmond, Va.	April 26, 1853.
Furnaces, hot-air	James Bolton, M. D.	Richmond, Va.	Dec. 20, 1853.
Furnaces, hot-air	M. B. Dyott	Philadelphia, Pa.	Aug. 30, 1853.
Furnaces, hot-air	Nathaniel A. Boynton	Boston, Mass.	Feb. 8, 1853.
Furnaces, hot-air	William Ennis	New York, N. Y.	Mar. 29, 1853.
Furnaces, hot-blast, arrangement of pipes for	Jesse Young	Franklin Furnace, Ohio	Aug. 2, 1853.
Gas-burners	Samuel R. Brick	Philadelphia, Pa.	May 24, 1853.
Grate-bars	Maria Louise Rocout	Paris, France	May 31, 1853; in France, Sept. 10, 1851.
Grate-bars	Samuel Van Syckel	Little York, N. J.	Aug. 23, 1853.
Kettle bails	Thos. H. Dodge	Nashua, N. H.	May 24, 1853.
Lamps	Charles J. Conway	New York, N. Y.	July 19, 1853.

Lamps	Owen Redmond	Rochester, N. Y	July 26, 1853.
Lamps, camphene	John Newell	Boston, Mass	Oct. 4, 1853.
Lamps, fluid	Samuel F. Allen	New York, N. Y	Nov. 29, 1853.
Lamps, lard	Leonard A Stockwell	Batavia, N. Y	Sept. 13, 1853.
Lamps, spirit	Alex. J. Walker	New York, N. Y	May 24, 1853.
Lanterns	Wm. Porter and Edward A. Tuttle	Williamsburgh, N. Y	July 5, 1853.
Lanterns, frames for	Elijah F. Parker	Proctorsville, Vt	Feb. 1, 1853.
Lanterns, omnibus	F. O. Deschamps	Philadelphia, Pa	July 26, 1853.
Ovens	Ephraim Treadwell	New York, N. Y	July 19, 1853.
Ranges, cooking	Alexander McPherson	New York, N. Y	April 19, 1853.
Ranges, cooking	Geo. S. G. Spence	Boston, Mass	Oct. 4, 1853.
Ranges, cooking	John P. Hayes	Boston, Mass	Oct. 4, 1853.
Ranges, cooking	Nicholas Mason	Roxbury, Mass	Sept. 27, 1853.
Registers, hot-air	Edward A. Tuttle	Williamsburgh, N. Y	April 12, 1853.
Registers, hot-air	Wm. H. Towers	Philadelphia, Pa	Nov. 15, 1853.
Safes, fire-proof, linings for	John Farrel	Philadelphia, Pa	July 19, 1853.
Smoke and gases, condensing	J. Bloom	East Woburn, Mass.	Nov. 29, 1853.
Stove-pipe collar	R. R. Finch, jr	New York, N. Y	Aug. 30, 1853.
Stoves	John J. Updegraff	Selin's Grove, Pa	April 5, 1853.
Stoves	S. S. Jewett and F. H. Root	Buffalo, N. Y	June 14, 1853; antedated Dec. 14, 1852.
Stoves	Thomas S. Gore	Jersey City, N. J	Aug. 30, 1853.
Stoves, air-tight, self-acting dampers for	Sergius P. Lyon	Farmington, Mich	Nov. 15, 1853.
Stoves, cooking	Giles F. Filley	St. Louis, Mo	June 14, 1853.
Stoves, cooking	Jordan L. Mott	New York, N. Y	Sept. 27, 1853.
Stoves, cooking	Matthäus Heim	Cincinnati, Ohio	May 17, 1853.
Stoves, cooking, and ranges, oven-doors for	Gibson North	Philadelphia, Pa	Aug. 16, 1853.
Stoves, cooking, boilers for	R. W. Belson	Philadelphia, Pa	June 7, 1853.
Stoves, radiator for	John C. Fletcher	Burlington, Iowa	May 24, 1853.
Stoves, radiator for	Samuel D. Tillman	Seneca Falls, N. Y	April 26, 1853.
Ventilating railroad cars	S. A. Clemens	Springfield, Mass	Nov. 22, 1853.
Ventilators	Joseph Leeds	Philadelphia, Pa	Nov. 15, 1853.
Ventilators, railroad car	Geo. Spencer	Utica, N. Y	Nov. 8, 1853.

CLASS VI.—STEAM AND GAS ENGINES, *including boilers and furnaces therefor, and parts thereof.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Boilers, steam	Benjamin Irving	Green Point, N. Y	Aug. 30, 1853; in France, May 12, 1853; in Belgium, May 17, 1853.
Boilers, steam	Charles F. Sibbald	Philadelphia, Pa	Dec. 20, 1853.
Boilers, steam, &c., corrugated plates for	Elizabeth Montgomery, assignee of Richard Montgomery.	New York, N. Y	May 17, 1853; in England, Feb. 17, 1853.
Boilers, steam, apparatus to regulate the supply of water to	Samuel R. Cline	Philadelphia, Pa	Aug. 2, 1853.

Classified list of patents issued.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Boilers, steam, construction of	John M. Reeder	Memphis, Tenn	Aug. 2, 1853.
Boilers, steam, detachable lining, for the fire-boxes of	John B. Collan	Reading, Pa	Oct. 11, 1853.
Boilers, steam, explosions, mode of obviating the danger from	Stephen Waterman	Williamsburgh, N. Y	Aug. 2, 1853.
Boilers, steam, method of connecting the sheets of sheet-flue and water-space.	Richard Montgomery	New York, N. Y	Jan. 11, 1853.
Boilers, steam, mode of indicating the height of water in	Nathan Thompson, jr.	Williamsburgh, N. Y	Aug. 2, 1853.
Cut-off gearing, adjustable, for puppet-valve engines	Horatio Allen and D. G. Wells	New York, N. Y	Feb. 15, 1853.
Cut-off, steam-engines for	Horatio Allen and D. G. Wells	New York, N. Y	June 21, 1853.
Engines, actuating, process for mixing air and steam for	William Mt. Storm	New York, N. Y	April 5, 1853.
Engines, actuating, use of steam for	Charles E., John, and Sam'l Wethered	Baltimore, Md	Sept. 27, 1853; in England, May 25, 1853.
Engines, air	Austin O. Wilcox	Philadelphia, Pa	July 19, 1853.
Engines, air	J. A. Woodbury, Joshua Merrill, and George Patten,	Winchester, Mass.; Boston, Mass.; Charlestown, Mass.	May 17, 1853; in England, Jan. 5, 1853.
Engines, air	J. A. Woodbury, Joshua Merrill, and George Patten.	Winchester, Mass.; Boston, Mass.; Boston, Mass.	Oct. 4, 1853; in England, Jan. 5, 1853.
Engines, hot-air	Austin O. Willcox	Philadelphia, Pa	Aug. 2, 1853.
Engines, locomotive	D. Winder	Xenia, Ohio	May 10, 1853.
Engines, locomotive, ash-pans for	Gilman Davis	Roxbury, Mass	Oct. 11, 1853.
Engines, oscillating	Alex. B. Latta	Cincinnati, Ohio	Oct. 11, 1853.
Engines, oscillating steam	Morris J. Gardner	York, Pa	Aug. 23, 1853.
Engines, rotary steam	James McKay	Philadelphia, Pa	Mar. 1, 1853.
Engines, rotary steam	John C. F. Salomon	Washington, D. C	Oct. 4, 1853.
Engines, rotary steam	Richard C. Bristol	Chicago, Ill	July 26, 1853.
Engines, steam, condensers for	Benjamin Crawford	Pittsburg, Pa	Nov. 1, 1853.
Engines, steam, planetary hydraulic	James Black	Philadelphia, Pa	Sept. 20, 1853.
Engines, steam, regulating the speed of	L. R. Faught	Macon, Ga	Nov. 1, 1853.
Gauges, pressure	Edward H. Ashcroft	Boston, Mass	July 12, 1853.
Generators, steam	Abel Shawk	Cincinnati, Ohio	Sept. 20, 1853.
Packing, piston, metallic	Henry L. Russell	Hudson, Mich	Oct. 25, 1853.
Packing, tightening of engine and pump pistons	Jno. Crabtree and Jos. Hopkinson	Philadelphia, Pa	Nov. 29, 1853.
Spark-arresters	Samuel Sweet	New York, N. Y	Oct. 25, 1853.
Spark-burner and water-heater for locomotives	David Matthew	Philadelphia, Pa	Dec. 6, 1853.
Steam, generating and condensing	Peter H. Watson	Washington, D. C	Nov. 1, 1853; antedated May 2, 1853.
Steam, method of generating	Jean B. Moinier and Pierre H. Boutigny	Paris, France	Aug. 23, 1853; in France, Jan. 18, 1852.
Valve-motion of oscillating engines	William Stephens	Pittston, Pa	Oct. 11, 1853.
Valves, cut-off, for steam-engines, the gear of variable	M. W. Baldwin	Philadelphia, Pa	Sept. 13, 1853.
Valves of rotary steam-engines	Benj. Gould, assignee of Joseph W. Webb	Aurora, N. Y	Jan. 18, 1853.
Valves of steam-engines, working the	Richard H. Townsend	New York, N. Y	Sept. 13, 1853.
Valves, safety, for locomotive engines	Henry Waterman	Hudson, N. Y	Nov. 15, 1853.
Valves, safety, for steam-boilers	Zadok H. Mann	Cincinnati, Ohio	Sept. 13, 1853.

Valves, supplemental, in reciprocating steam-engines	Charles A. Spring	Kensington, Pa	Mar. 1, 1853.
Valves, supplemental, to the equilibrium-pipe of the cornish engine,	Henry P. M. Birkinbine	Philadelphia, Pa	Nov. 15, 1853.
Valve, throttle, arrangements	John E. Anderson	New York, N. Y	Oct. 4, 1853.

CLASS VII.—NAVIGATION AND MARITIME IMPLEMENTS, *comprising all vessels for conveyance on water, their construction, rigging, and propulsion, diving-dresses, life-preservers, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Blocks, ships'	Charles H. Platt	New York, N. Y	Sept. 27, 1853.
Blocks, ships'	Wm. and S. G. Coleman	Providence, R. I	Aug. 16, 1853.
Boats, life	Daniel Dodge and P. Burgess	New York, N. Y.; Boston, Mass	Aug. 9, 1853.
Boats, life	Lawrence F. Frazee	New Brunswick, N. J	Nov. 22, 1853.
Boats, life	Yelland Foreman	New York	Oct. 11, 1853.
Boat or scow	Abijah R. Tewksbury	Boston, Mass	Aug. 16, 1853.
Boats, ships', suspending, lowering, and liberating	William Stirling Lacon	Great Yarmouth, England	Feb. 22, 1853; in England, Feb. 23, 1852.
Cable, chain, stopper	John E. Crane	Lowell, Mass	April 5, 1853.
Diving-bells	Henry B. Sears, assignee of J. Foreman, administrator of E. W. Foreman.	New York, N. Y	Aug. 23, 1853.
Life-preserving bucket	Nathan Thompson, jr.	Williamsburgh, N. Y	Oct. 18, 1853.
Life-preserving seat	Nathan Thompson, jr.	Williamsburgh, N. Y	Oct. 18, 1853.
Paddle-wheel	Benjamin Irving	Greenpoint, N. Y	Sept. 6, 1853.
Paddle-wheel	Wm. H. Muntz	Norton, Mass	Nov. 15, 1853.
Paddle-wheels for steamers, feathering	Alexander H. Brown	Washington City, D. C	July 19, 1853; in England, Mar. 5, 1853.
Paddles for vessels	Amzi C. Semple	Cincinnati, Ohio	July 5, 1853.
Propellers	Banford Gilbert	Pittsburg, Pa	Nov. 15, 1853.
Propellers	Charles T. P. Ware	New York, N. Y	Oct. 4, 1853.
Propellers	Ebenezer Beard	New Sharon, Me	Oct. 18, 1853
Propellers	Henry W. Hewitt	New York, N. Y	June 7, 1853.
Propellers	James Trees	Salem, Pa	Oct. 25, 1853.
Propellers for canal navigation	William F. Tyson	Orwigsburg, Pa	June, 21, 1853; antedated Dec. 21, 1852.
Propellers, screw, adjustable	Charles F. Brown	Warren, R. I	July 12, 1853.
Propellers, screw, application of high-pressure engines to	Harry Whittaker	Buffalo, N. Y	Oct. 18, 1853.
Propellers, vibrating, operating	Thos. Spiller and Anthony Crowhurst	Red Lion Square, England	Nov. 8, 1853; antedated Feb. 8, 1853.
Propelling vessels	Frederick P. Dimpfel	New York, N. Y	Oct. 25, 1853.
Propelling vessels	Sir Thomas L. Mitchell	Birkenhead, England	July 5, 1853; in England, Nov. 25, 1848.
Rudder-brace	Benj. F. Delano	Chelsea, Mass	Aug. 16, 1853.
Rudder of steam-vessels, operating and controlling the	Frederick E. Sickels	New York, N. Y	May 10, 1853.

Classified list of expired patents.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Screw for planking ships	Solon Staples	Topsham, Me	Dec. 20, 1853.
Ships, side-lights	Charles Perley	New York, N. Y	Oct. 25, 1853.
Ships, side-lights for	Enoch Hidden	New York, N. Y	June 21, 1853.
Steering apparatus	Charles Flanders	Boston, Mass	Oct. 18, 1853.
Towing apparatus for canal boats	Stephen F. Palmer	New York, N. Y	April 26, 1853.
Vessels, attaching the head cringle to the yards of	Nelson Crocker	Sandwich, Mass	Oct. 25, 1853.
Vessels, centre-board and rudder for shoal-water	George Chase	Prudence Island, R. I	Feb. 8, 1853.
Vessels, sail, supporting the topping-lift and peak-halyard block of,	William and Stephen G. Coleman	Providence, R. I	Mar. 15, 1853.
Vessels, war, protecting bulwarks for	William Ballard	New York, N. Y	Nov. 1, 1853.

Class VIII.—Mathematical, philosophical, and optical instruments, *including clocks, chronometers, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Clocks, balance, new mode of applying the vibrating spring of	Silas B. Terry	Plymouth, Conn	Nov. 29, 1853.
Clocks, calendar	John H. H. Hawes	Ithaca, N. Y	May 17, 1853.
Clocks, illuminated	James Glenn	New York, N. Y	Dec. 6, 1853.
Electric telegraphs	Moses G. Farmer	Salem, Mass	Mar. 29, 1853.
Electro-magnetic alarms	Rev. Augustus R. Pope	Somerville, Mass	June 21, 1853.
Electro-magnetic annunciators. (See Class XXII., A.)			
Electro-magnetic telegraphs, indicating	John Davis	New Bedford, Mass	Dec. 6, 1853.
Galvanic batteries, porous cells for	Moses G. Farmer	Salem, Mass	Jan. 11, 1853.
Levels, spirit, mounting	Sylvester J. Sherman	New York, N. Y	July 19, 1853.
Magnetic machine for washing and separating gold	Samuel Gardiner, jr.	New York, N. Y	Mar. 8, 1853.
Magneto-electric machines	Calvin Carpenter, jr	Pawtucket, Mass	Nov. 1, 1853; in France, April 18, 1858.
Pendulum, apparatus for illustrating the motion of a, upon the earth's surface.	George M. Dimmock	Springfield, Mass	July 12, 1853.
Pendulum-balance for quick weighing. (See Class XII., W.)			
Pendulum-levels	Thomas A. Chandler	Rockford, Ill	May 17, 1853.
Plotting, instruments for	Thomas Hinkley	Hallowell, Me	Oct. 18, 1853.
Square, carpenter's, machines for figuring. (See Class XIV.)			
Telegraph and railway, atmospheric. (See Class IX., R.)			
Telegraphic registers, self-winding	James J. Clark	Philadelphia, Pa	Oct. 18, 1853.
Telegraphic registers, self-winding	James J. Clark	Philadelphia, Pa	Jan. 4, 1853.

Theodolite, plotting	Levi Pitman	Thom's Brook, Va	July 26, 1853.
Time-registers for showing the day of the week and month	W. T. Huntington, assignee of Wm. H. Akins	Ithaca, N. Y	Dec. 20, 1853.
Voltaic batteries, and apparatus for medical and other purposes	Isaac L. Pulvermacher	Breslau, Prussia	Feb. 1, 1853; in Austria, Oct. 9, 1849.
Watches and chronometers	Thomas Nelson	Troy, N. Y	May 24, 1853.

CLASS IX.—CIVIL ENGINEERING AND ARCHITECTURE, *comprising works on rail and common roads, bridges, canals, wharves, docks, rivers, wiers, dams, and other internal improvements, buildings, roofs, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Blasting powder	Wm. Silver, jr	Pittston, Pa	Nov. 22, 1853.
Blowpipe, compound, for enlarging blasting cavities	Ancil Stickney	Norwich, Vt	Sept. 20, 1853; antedated June 11, 1853.
Blowpipe for enlarging blasting cavities	Ancil Stickney	Norwich, Vt	Sept. 20, 1853; antedated May 10, 1853.
Boring rock, machine for	Ebenezer Talbot	Windsor, Conn	June 7, 1853.
Bridges, ferry, self-adjusting platform for	Gerard Sickels	Brooklyn, N. Y	June 7, 1853.
Bridges, transporting	Samuel and Thomas Champion	Washington, D. C	Nov. 22, 1853; antedated May 22, 1853.
Buildings, facing	Michael B. Dyott	Philadelphia, Pa	Aug. 16, 1853.
Chairs, railroad, machines for making	R. Griffiths, assignee of Robert Griffiths and George Shield.	Newport, Ky.; Cincinnati, Ohio	Oct. 18, 1853.
Chairs, railroad, machinery for making	William Van Anden	Poughkeepsie, N. Y	Aug. 2, 1853.
Ditching-machine	Jonathan W. Morrill	Hampton Falls, N. H	May 10, 1853.
Ditching, machines for	Ralph C. Pratt	Canandaigua, N. Y	July 19, 1853.
Excavators, bar, self-acting	G. T. Beauregard	New Orleans, La	Oct. 25, 1853.
Fences	Hervy S. Ross	Cincinnati, Ohio	Sept. 13, 1853.
Fences, iron	Benj. F. Miller	New York, N. Y	Nov. 29, 1853.
Fences, iron posts for	John W. Jenkins	Greenport, N. Y	Aug. 9, 1853.
Fences, wire	Matthew Walker, sen., D. S. Walker, and Matthew Walker, jr.	Philadelphia, Pa	Mar. 29, 1853.
Fences, wire	Wm. H. Meriwether	New Braumfels, Texas	Nov. 8, 1853.
Friction, anti, boxes	Jno. Rice, assignee of Geo. T. Parry	Philadelphia, Pa	Aug. 2, 1853.
Friction rollers	James Patterson	Franklinville, N. Y	Aug. 9, 1853.
Gates, apparatus for opening and closing	Samuel G. Dugdale	Richmond, Ind	Oct. 11, 1853.
Gates, farm, hanging	John Filson	Millroy, Pa	Feb. 8, 1853.
Gates, mode of opening and closing	Wm. T. Merritt	Hart's Village, N. Y	Nov. 1, 1853.
Rails, compound	Richard H. Middleton	Alexandria, Va	May 31, 1853.
Rails for railroads	Charles E. Smith, assignee of J. Dutton Steele	Philadelphia, Pa.; Pottstown, Pa	May 3, 1853; antedated Nov. 3, 1852.
Rails for railroads	Patrick O'Reilly	Reading, Pa	May 3, 1853; antedated Nov. 3, 1852.

Classified list of patents issued.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Rails, machines for straightening or curving	George Williston	Brunswick, Me	Nov. 1, 1853.
Railway and telegraph, atmospheric	Ithiel S. Richardson	Boston, Mass	Aug. 2, 1853; in England, Dec. 7, 1852.
Switches, railroad	James M. Dick	Buffalo, N. Y	Sept. 27, 1853.
Switches, self-acting	Archibald S. Littlefield	Portland, Me	Oct. 4, 1853.
Tunnels, submarine	Joseph R. Miller	Jersey City, N. J	Aug. 2, 1853.
Water-closets. (See Class XXII.)			

CLASS X.—LAND CONVEYANCE, *comprising carriages, cars, and other vehicles, used on roads and parts thereof.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Brakes, car	John D'Homergue	New York, N. Y	Dec. 20, 1853.
Brakes, iron, car	Stephen Morse	Springfield, Mass	Sept. 6, 1853.
Brakes, operating, by signal-cord	William G. Creamer	New Haven, Conn	Dec. 20, 1853.
Brakes, railroad car	Gregor Trinks	Jersey City, N. J	April 5, 1853.
Brakes, wagon	W. D. Williams	Raleigh, N. C	Nov. 8, 1853.
Car-bodies, iron	Thomas E. Warren	Troy, N. Y	Oct. 18, 1853.
Car-couplings	A. P. Chatham	Canoga, N. Y	Nov. 1, 1853.
Car, railroad, ventilator. (See Class V., V.)			
Car, railroad, excluding dust from. (See Class V.)			
Car, replacing upon railroad tracks	Lucian B. Flanders	Dunkirk, N. Y	Dec. 6, 1853.
Car-seats, railroad	Isaac Fay	Cambridgeport, Mass	Sept. 20, 1853.
Car-seats, railroad	John Briggs	Boston, Mass	Feb. 15, 1853.
Car-seats, railroad	Samuel Hicock	Buffalo, N. Y	Aug. 9, 1853.
Car-seats, railroad	Union Patent Sofa and Railroad-car seat Manufacturing Co., assignee of Chas. P. Bailey.	New York, N. Y.; Zanesville, Ohio	July 12, 1853.
Car-seats, railroad	William M. Warren	Watertown, Conn	July 26, 1853.
Car-seats, railroad	William M. Warren	Watertown, Conn	Aug. 23, 1853.
Carriages with shifting seats	Godfrey Simon	Reading, Pa	Dec. 20, 1853; in England, Mar. 4, 1853.
Omnibus registers	Peter Taltavul	Washington, D. C	Jan. 25, 1853.
Shafts of vehicles, to the axles attaching	Safford E. Sturtevant	Hartford, Vt	Nov. 8, 1853.
Shafts to axles, coupling	E. B. Benedict	Clinton Corner P. O., N. Y	Nov. 29, 1853.
Springs, adjustable, for carriages	Russell S. Morse	Dixfield, Me	Nov. 1, 1853.
Springs, combined india-rubber and steel	Erastus T. Bussell	Shelbyville, Ind	Nov. 29, 1853.
Wheels, car	Carmi Hart	Bridgeport, Conn	Dec. 13, 1853.

Wheels, car	Daniel P. Fales	West Poultney, Vt	Sept. 27, 1853
Wheels, car	Joel Baker	Boston, Mass	Oct. 4, 1853.
Wheels, car	Joseph Farnsworth	Madison, Ind	Nov. 1, 1853.
Wheels, car	Zadoc H. Mann	Newport, Ky	Oct. 4, 1853.
Wheels, guide for dowelling felloes for	Wm. C. Dean	Jacksonville, N. Y	Oct. 4, 1853.
Wheels, railroad car	Thomas J. Eddy	Waterford, N. Y	Aug. 2, 1853.

Class XI.—Hydraulics and pneumatics, *including water-wheels, windmills, and other implements operated on by air or water, or employed in the raising and delivery of fluids.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Cock stop	Elizur Wright	Boston, Mass	Oct. 4, 1853.
Draining-machine, centrifugal	William Richardson	New Orleans, La	Sept. 27, 1853.
Filter, compositions for a. (See Class IV)			
Hose coupling	Ralph James Falconer	Washington, D. C	June 7, 1853.
Hose coupling	Smith Groom	Troy, N. Y	July 12, 1853.
Hose pipes	Richard Hollings	Boston, Mass	Jan. 4, 1853.
Hose protector	David Demarest	New York, N. Y	Nov. 1, 1853.
Hydraulic motors	Uriah A. Boyden	Boston, Mass	Sept. 20, 1853.
Hydrant valve	James Cochrane	New York, N. Y	Dec. 13, 1853.
Metres, fluid	William B. Leonard	New York, N. Y	Nov. 1, 1853.
Metres, water	John Hartin	New York, N. Y	May 24, 1853.
Pipes, hydraulic cement, forming	John B. and Wm. F. Poagne	Fancy Hill, Va	Nov. 29, 1853.
Pump valves	James B. Williams, assignee of Joel R. Bassett	Cincinnati, Ohio	Dec. 13, 1853.
Pump valves	Nehemiah Dodge	New York, N. Y	May 10, 1853.
Pumps	Levi P. and Wm. F. Dodge	Newbury, N. Y	June 7, 1853.
Pumps, hydraulic steam	Horatio N. Black	Philadelphia, Pa	Mar. 22, 1853.
Pumps, steam diaphragm, working the condenser attached to	James Black and Orson Beecher	Philadelphia, Pa	Jan. 25, 1853.
Ram, hydraulic	Joseph C. Strode	East Bradford, Pa	Oct. 4, 1853.
Turbines	Uriah A. Boyden	Boston, Mass	Sept. 20, 1853.
Turbines	Uriah A. Boyden	Boston, Mass	Sept. 20, 1853.
Water from wells, apparatus for drawing	Joseph Kent, assignee of Samuel R. Wilmot	Baltimore Co., Md.; New Haven, Conn	May 3, 1853.
Water-meters	William H. Lindsay	New York, N. Y	April 5, 1853.
Water-wheels	Frederick Smith	Pontiac, N. Y	Nov. 22, 1853.
Water-wheels, overshot	Jno. E. Whitemore	Joliet, Ill	Dec. 6, 1853.
Water-wheels, saw for	Oscar Willis	Brindletown, N. C	Sept. 20, 1853.
Water-wheels, turbine	Henry Vendewater	Albany, N. Y.	Oct. 4, 1853.

Classified list of patents issued.—Continued.

CLASS XII.—LEVER, SCREW, AND OTHER MECHANICAL POWER, *as applied to pressing, weighing, raising, and moving weights.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Presses	Wm. C. Semple, assignee of Amzi C. Semple	Cincinnati, Ohio	June 28, 1853.
Presses, &c., metallic boxes for	J. Foster, jr., and Platt Evens, jr	Cincinnati, Ohio	June 28, 1853.
Presses, cheese	M. A. Hackley	Belleville, N. Y	Mar. 22, 1853.
Presses, cotton	J. B. Armstrong	Barnwell, S. C	Dec. 20, 1853.
Presses, screw, for packing-boxes	George W. Wight	New York, N. Y	June 7, 1853.
Presses, sector	Samuel Rust	New York, N. Y	April 5, 1853.
Presses, self-acting	S. R. Holt	Worthington, Ohio	Nov. 22, 1853.
Scales, platform	Elnathan Sampson	Cornish, N. H	Nov. 22, 1853.
Scales, platform	S. T. McDougall	New York, N. Y	Nov. 22, 1853.
Screw-jacks for raising buildings	Nelson A. Hume, assign. of Frederick Nicholson	Rushford, N. Y.; Warsaw, N. Y	Nov. 29, 1853.
Weighing grain, self-acting machines for	Isaac D. Garlick	Lyons, N. Y	Dec. 20, 1853.
Weighing, pendulum-balance for quick	Benjamin Fenn	Hartford, Ohio	Mar. 29, 1853.

CLASS XIII.—GRINDING-MILLS AND MILL-GEARING, *including grainmills, mechanical movements and horse-powers, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Bran-dusters	Ezra R. Benton	Cleveland, Ohio	July 26, 1853.
Bran-dusters	Levi S. Reynolds	Indianapolis, Ind	June 28, 1853.
Gearing, multiplying	F. Dibben and L. Bolleman	New York, N. Y	Aug. 9, 1853.
Mill-stones, dressing-machines for	W. B. Cummings, N. P. Dadman, and C. A. Blood, assignees of W. B. Cummings and N. P. Dadman.	Tynsborough, Mass.; Chelmsford, Mass.; North Chelmsford, Mass.	Nov. 22, 1853.
Mill-stones, eyes for	Edmund Munson	Utica, N. Y.	July 19, 1853.
Mills, cider	John Krauser	Reading, Pa	Aug. 30, 1853.
Mills for grinding apples and other substances	F. B. Hunt	Westfield, Ind	July 26, 1853.
Motion, converting rotary into reciprocating	Henry Baker	Cattskill, N. Y	June 7, 1853.
Smut-machines	Benj. Rutter and Henry Rouzer	Piqua, Ohio	Oct. 4, 1853.
Smut-machines	Dan Pease, jr	Floyd, N. Y	Jan. 11, 1853.
Smut-machines	H. L. Fulton	Chicago, Ill	April 12, 1853.
Smut-machines	Robert Waskey	Millcreek, Va	Sept. 27, 1853.
Smut-machines	Samuel Cook	Brockport, N. Y	April 26, 1853.
Smut-machines	William Zimmerman	Quincy, Ill	Sept. 27, 1853.
Smut-machines, beaters of	Ziba Durkee	Alden, N. Y	July 26, 1853.

CLASS XIV.—LUMBER, *including machines and tools for preparing and manufacturing, such as sawing, planing, mortising, shingle and stave, carpenters' and coopers' implements.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Augur-handles and braces, socket for	Arshal H. McKinley	Higginsport, Ohio	Aug. 16, 1853.
Barrel-heads, chuck for cutting	Franklin Fruit	Jefferson City, Mo.	Nov. 15, 1853.
Barrel-heads, machinery for cutting	Charles B. Hutchinson	Waterloo, N. Y	Feb. 1, 1853.
Barrel-heads, machines for sawing	Paris J. Steer	Cheshire, Mass	May 3, 1853.
Bit-stocks of braces	John Comstock	New London, Conn.	Dec. 13, 1853.
Brace and bit-fastener, carpenters'	Howard Perkins	South Bridgewater, Mass.	Nov. 1, 1853.
Boring-machines	Samuel T. Sanford	Fall River, Mass.	July 12, 1853.
Boring wheel-hubs, cutter for	Leonard S. Maring	Westport, Mass.	Oct. 4, 1853.
Boxes, &c., method of joining corners of	John Bell	Harlem, N. Y	Jan. 25, 1853.
Clamps, carpenters'	Benj. H. Green	Princeton, N. J.	Aug. 9, 1853.
Clamps for laying floors	Stephen E. Parrish	New York, N. Y	Sept. 27, 1853.
Counter-sinks	A. G. Bachelder	Lowell, Mass	May 10, 1853.
Lath-machines	J. R. Shank	Buffalo, Va.	June 21, 1853.
Lathes for turning interior and exterior surfaces	Nathan Chapin	New York, N. Y	Jan. 11, 1853.
Lathes for turning irregular forms	Benj. F. Jenkins and Luke L. Knight	Barre, Mass	Jan. 4, 1853.
Lathes, turning	Warren Aldrich	Lowell, Mass	Mar. 15, 1853.
Match-splint machines	R. F. Gustine	Chicago, Ill	April 12, 1853.
Mortising-machines	Fergus Purden	Baltimore, Md	June 14, 1853.
Mortising-machines	James Moreland	Adrian, Mich	Feb. 22, 1853.
Moulding-machines, cutter-heads for	Josiah M. Smith	New York, N. Y	Sept. 13, 1853.
Planing clapboards, machine for sawing and	Ephraim Parker	Rock Island, Ill	Dec. 20, 1853.
Planing-machine	Wm. J. Thurman, assignee of Rich. H. Pindell	Washington, Ky.; Fayette Co., Ky	Oct. 4, 1853.
Planing metal, machines for	Frederick W. Howe	Windsor, Vt.	June 21, 1853.
Planing mouldings, cutters for	R. M. Evans and Asa Weeks, assignees of R. M. Evans.	Gilford, N. H.	Dec. 6, 1853.
Planing mouldings, machines for	John D. Dale	Philadelphia, Pa.	Jan. 4, 1853.
Planing mouldings, machines for	John D. Dale	Philadelphia, Pa.	Jan. 4, 1853.
Plug-cutting machines, feed-motion in	Simon Ingersoll	New York, N. Y	June 21, 1853.
Sash, &c., circular-machine for dressing	Leonard Gilson	Brighton, Mass	Nov. 15, 1853.
Saw-mills	Andrew Ralston	West Middletown, Pa.	Aug. 30, 1853.
Saws	J. H. Tuttle	Seneca, N. Y.	June 21, 1853.
Saws, adjusting dishing	Ephraim B. Wells	Uniontown, Pa.	July 12, 1853.
Saws, circular, mode of operating	Ammi M. George	Nashua, N. H	Jan. 11, 1853.
Saws, driving circular	Joseph Harris, jr	Boston, Mass	Oct. 11, 1853.
Saws, etc., driving circular	George and David Cook	New Haven, Conn.	Jan. 18, 1853.
Saws, hanging	Nathan T. Coffin	Knightstown, Ind.	July 19, 1853.
Saws, mill, forming teeth on	Nathan T. Coffin	Knightstown, Ind.	July 12, 1853.
Saws, mill, hanging	James Rankin	Detroit, Mich	Sept. 13, 1853.
Saws, mill, mode of operating	Benjamin Frazee	Verona, N. Y	Oct. 18, 1853.
Saws, mode of driving	Isaac Brown	Baltimore, Md	July 19, 1853.
Saws straining by compressed air	Jackson A. Rapp and E. S. Wright	Buffalo, N. Y	July 26, 1853

Classified list of patents issued.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Sawing sticks for broom-handles, machine for. (See Class XXII., B.)			
Shingle-machines	Abel Bradway, assignee of Elijah Valentine	Monson, Mass.; Palmer, Mass.	Aug. 30, 1853.
Shingle-machine	B. F. Stevens and Walter Kidder	Lowell, Mass	Dec. 20, 1853.
Shingle-machine	Enoch R. Morrison	Troy, Pa.	Nov. 22, 1853.
Shingle-machine	Israel Graves and Charles A. Bogert	West Dresden, N. Y.	Nov. 29, 1853.
Shingle-machine	Simon Ingersoll	New York, N. Y	April 12, 1853.
Shingles, machine for dressing	Joel Tiffany	Cleveland, Ohio	Mar. 8, 1853.
Slat-machine for window-blinds	Elihu R. Benson	Warsaw, N. Y	Oct. 4, 1853.
Spoke-timber, machines for preparing	Aaron W. Geaheart	Beallsville, Chio	Aug. 16, 1853.
Squares, carpenters', machines for figuring	Norman Millington and Dennis J. George	Shaftesbury, Vt	Oct. 18, 1853.
Staves, machine for dressing	Joseph D. Elliot	Leicester, Mass.	Nov. 15, 1853.
Staves, machine for finishing the ends of	Jonathan E. Warner	Boston, Mass.	Nov. 15, 1853.
Staves, machine for jointing	Charles B. Hutchinson	Syracuse, N. Y.	Oct. 4, 1853.
Tenons, mode of cutting	Charles B. Fitch	Galena, Ill	June 14, 1853.
Timber, crooked, machine for dressing	Franklin Slaughter, assign. of Evan H. Branson	Fredericksburg, Va.	Nov. 15, 1853.
Timber, machine to cut polygonal surfaces in	Elias Unger	Dayton, Ohio	Dec. 20, 1853.
Tongueing, and grooving, and moulding-cutters	John C Da Costa, assignee of James M. Patton and Wm. F. Fergus.	Philadelphia, Pa.	May 10, 1853.
Tongueing and grooving-machines	William Watson	Chicago, Ill	Jan. 4, 1853.
Turning, arrangement of cutters for	Milton Roberts	South Levant, Me	Aug. 23, 1853.
Turning cylinders of wood, machine for	Increase S. Waite	Hubbardstown, Mass	Nov. 1, 1853.
Turning irregular forms, machines for	Lauren Ward, adm'r of Richard Ward, J. B. Hubbell, and Hart C. Hubbell.	Naugatuck, Conn.	Feb. 22, 1853.
Turning irregular forms, machines for	Lauren Ward, adm'r of Richard Ward	Naugatuck, Conn.	June 28, 1853.
Turning-machinery, expanding mandrels for	Walter Sherrod	Providence, R. I	June 21, 1853.
Turning or cutting irregular forms, machine for	Nathaniel Gear	Zanesville, Ohio	Nov. 8, 1853.
Turning spiral mouldings, machine for	Philip P. Ruger	New York, N. Y.	Oct. 4, 1853.
Veneering, method of	L. F. Robinson, assignee of Caleb B. Burnap	Hartford, Conn.	Sept. 27, 1853.

CLASS XV.—STONE AND CLAY MANUFACTURES, *including machines for pottery, glass-making, brick-making, dressing and preparing stone, cements, and other building materials.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Brick-machines	Alex. H. Sampson	New Orleans, La	June 14, 1853.
Brick-machines	Hiram Sands and Gary Cummings	Now of Washington, D. C.; West Derby, Vt.	Sept. 6, 1853.
Brick, machines for moulding	Jas. Sully and Jno. Butter, assign. of Jno. Butter.	Buffalo, N. Y	Dec. 13, 1853.
Furnaces, glass, mode of feeding rosin to fires of	Benj. Shiverick	South Sandwich, Mass	Feb. 1, 1853.
Glass, fire-polishing	John L. Gilliland	Brooklyn, N. Y	Jan. 11, 1853.
Glass, manufacturing	A. K. Hay and Jas. M. Brookfield, assignees of Jacob Faatz and Ephraim V. White; Faatz declared by Judge Morsell to be joint inventor with White.	Faatz's residence, Dyberry Township, Pa.	June 14, 1853.
	Jas. M. Brookfield and Ephraim V. White, applicants.	Honesdale, Pa.	
Glass, plate, manufacture of	J. J. Greenough	Boston, Mass	June 14, 1853.
Kilns, lime	Samuel J. Seely	New York, N. Y	May 17, 1853; antedated Nov. 17, 1852.
Stone, artificial. (See Class IV.)			
Stone-dressing, machines for	E. G. Matthews	Troy, N. Y	Oct. 25, 1853.
Stone, machines for sawing	J. T. Bruen and J. G. Wilson	Hastings, N. Y	Jan. 4, 1853.
Stone-saws	Samuel Chapman, jr	New York, N. Y	Nov. 29, 1853.

CLASS XVI.—LEATHER, *including tanning and dressing, manufacture of boots, shoes, saddlery, harness, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Boot-counters, machines for skiving	Samuel J. and Charles H. Trofatter	Salem, Mass	Nov. 29, 1853.
Boot-jacks	Samuel B. Sumner	Grantville, Mass	Sept. 13, 1853.
Boots and shoes, cutting	John Chilcott and Robert Snell	Brooklyn, N. Y	Sept. 13, 1853; in Belgium, Sept. 16, 1852; in France, Sept. 17, 1852; in England, Sept. 30, 1852.
Boots and shoes, india-rubber soles for	John Chilcott and Robert Snell	Brooklyn, N. Y	Sept. 13, 1853.
Boots and shoes, machines for pegging	Alpheus C. Gallahue	Allegheny City, Pa	Aug. 16, 1853; antedated Feb. 18, 1853.
Boots and shoes, machines for pegging	E. L. Norfolk, assignee of Seth D. Tripp	Salem, Mass.; Rochester, Mass	April 12, 1853.
Boots and shoes, machine for trimming soles of	John H., Jas. M., and Hosea Q. Thompson	Holderness, N. H	Nov. 15, 1853.
Boots and shoes, screw-fastenings for	John Chilcott and Robert Snell	Brooklyn, N. Y	Sept. 13, 1853.
Boots, cutting	Daniel Lynahon	Buffalo, N. Y	Oct. 18, 1853.

Classified list of patents issued.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Buckles	P. P. R. Hayden	New York, N. Y	Jan. 11, 1853.
Collars, horse	Joseph R. Lindner	New York, N. Y	Sept. 6, 1853.
Collars, horse	William McK. Thornton	Bloomsburg, Pa	June 21, 1853.
Harness	James Stanbrough	Newark, N. Y	Mar. 22, 1853.
Leather beltings, fastening	Enoch Osgood	Bangor, Me	May 10, 1853.
Leather, gripes for holding	Hiram Pierce and George E. Cady, assignees of Bradford Rowe.	Albany, N. Y	July 19, 1853.
Leather, machines for creasing straps of	Daniel H. Hovey	Kilborn, Ohio	Nov. 15, 1853.
Leather, machines for polishing	Frederick Seibert	Williamsburgh, N. Y	Nov. 29, 1853.
Leather, machines for rubbing and polishing	Jos. F. Flanders	Newburyport, Mass	Oct. 4, 1853.
Leather-splitting, machines for	Charles Weston	Salem, Mass	Aug. 30, 1853.
Leather-straps, edging-machines for	James Barnes	Franklin, N. Y	Sept. 6, 1853.
Rasps, peg	Joseph Sawyer and Lyman Clark	Royalston, Mass	Dec. 13, 1853.
Saddle-trees	Joseph Contner	Millroy, Pa	Jan. 18, 1853.
Tanning	John J. Fulton	Monongahela City, Pa	July 12, 1853.
Tanning	Roswell Enos and Bela T. Hunt	St. Charles, Ill	Mar. 22, 1853.
Tanning hides and skins	Henry Bretney	Springfield, Ohio	Jan. 25, 1853.
Trunk-frames, metallic	Lazare Cantel	New York, N. Y	Dec. 20, 1853.
Wax-ends. (See Class XXII.)			

Class XVII.—Household furniture, machines and implements for domestic purposes, *including washing machines, bread and cracker machines, feather-dressing, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Apples, machines for paring	H. F. Wilson and Sarah E. Fenwick, assignees of W. H. Lazelle.	New York, N. Y.; Washington, D. C.	Jan. 25, 1853.
Apples, machines for paring	James Sargent and D. P. Foster, assignees of E. L. Pratt.	Shelburn, Mass.; Worcester, Mass.	Oct. 4, 1853.
Bed-bottoms	Pierre Demeure and Auguste Mauritz	New York, N. Y	Sept. 13, 1853.
Beds, air	John Scott	Philadelphia, Pa	Oct. 18, 1853.
Beds, sofa	Edwin B. Bowditch	New Haven, Conn	Oct. 18, 1853.
Bedstead-fastenings	Asa N. and Alden Case	Gustavus, Ohio	Mar. 1, 1853.
Bedstead-fastenings	Charles L. Bauder	Cleveland, Ohio	Jan. 18, 1853.
Bedstead-fastenings	E. S. Taylor	Cleveland, Ohio	Mar. 1, 1853.
Bedstead-fastenings	G. W. Baynes, Thos. Hinty, and M. Jackson	Glenville, Va	Aug. 16, 1853.

Bedstead-fastenings	W. E. Merrill and F. Tupper	Nashua, N. H.	Dec. 13, 1853.
Bedstead-rails, &c., cutting screws on, apparatus for	Hiram Smith	Norwalk, Ohio	Nov. 22, 1853.
Bedstead-rails, &c., cutting screws on, apparatus for	James R. Kain	Fiffin City, Ohio	Nov. 22, 1853.
Bedstead-rails, &c., cutting screws on, machine for	J. Parsons Owen	Norwalk, Ohio	Nov. 22, 1853.
Bedsteads, folding, hinges for	John Binder	Chelsea, Mass	Aug. 16, 1853.
Bedsteads, sectional	Charles Page	North Danvers, Mass	Dec. 13, 1853.
Bedsteads, sofa	Lewis L. Gilliland and J. R. Wagoner	Dayton, Ohio	May 17, 1853.
Bedsteads, wardrobe, folding bureau or	Andres E. Botter	New York, N. Y	Dec. 20, 1853.
Bristles for brushes, preparation of	Charles Williams	Philadelphia, Pa	July 19, 1853.
Brushes	J. Cross	New London, Ohio	July 5, 1853.
Butter-workers	E. J. Dickey	Hopewell Cotton Works, Pa	July 12, 1853.
Butter-workers	Lettie A. Smith	Pineville, Pa	Aug. 23, 1853.
Canisters, preserve, sealing	Henry Hunt	Brooklyn, N. Y	Sept. 6, 1853.
Carpet-stretchers	J. W. Weatherby	Kingsville, Ohio	Oct. 18, 1853.
Chairs, rocking	Peter Ten Eyck	New York, N. Y	Mar. 15, 1853.
Chairs, step library. (See Class XXII.)			
Clothes-lines, spring clamps for	David M. Smith	Springfield, Vt	Oct. 25, 1853.
Clothes-lines, spring clamps for	F. S. Hotchkiss and C. W. Blakeslee	Northfield, Conn	Dec. 13, 1853.
Cradle and tête-à-tête	George H. Hazlewood	Boston, Mass	July 5, 1853.
Feathers, cleansing hair and, from insects, &c	William Wisdom	Cleveland, Ohio	Dec. 20, 1853.
Furniture, upholstering	Frederick Mathesius	New York, N. Y	May 17, 1853.
Griddles	Banford Gilbert	Pittsburg, Pa	Oct. 11, 1853.
Lounges	Augustus Eliaers	Boston, Mass	Oct. 25, 1853.
Mattresses, spring	Edwin L. Bushnell	Poughkeepsie, N. Y	April 12, 1853.
Meat-cutters	Stanislas Millet	New York, N. Y	May 24, 1853.
Meat-tenderers	William Beach	Philadelphia, Pa	Aug. 16, 1853.
Mop-heads	Harvey Murch	Lebanon, N. H	June 14, 1853.
Mop-heads	Timothy Randlett	Enfield, N. H	Nov. 15, 1853.
Nut-crackers	Philos, Eli W., and J. A. Blake	New Haven, Conn	Sept. 6, 1853; antedated Mar. 6, 1853.
Refrigerators for cooling liquids	B. H. Bartol	Philadelphia, Pa	June 28, 1853; in Cuba, Oct. 8, 1852.
Table-leaves, falling, supporting	Charles Phelps	Salem, Mass	Nov. 29, 1853.
Table-tops, machine for jointing	W. J. Hatfield	Dayton, Ohio	Dec. 20, 1853.
Tables, dining, self-waiting	Lea Pusey	Patterson, Pa	June 14, 1853.
Washing-machines	Charles Wilgus	West Troy, N. Y	April 12, 1853.
Washing-machines	Evan L. Evans	Hartford, Conn	May 10, 1853.
Washing-machines	H. G. Robertson	Greenville, Tenn	Oct. 11, 1853.
Washing-machines	Joel Wisner	Aurora, N. Y	Nov. 8, 1853.
Washing-machines	Thomas A. Dugdale	Richmond, Ind	June 7, 1853.

Classified list of patents issued.—Continued.

CLASS XVIII.—ARTS, POLITE, FINE, AND ORNAMENTAL, *including music, painting, sculpture, engraving, books, paper, printing, binding, jewelry, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Boards, binders', machine for cutting	Jno. E. Coffin, assignee of John A. Elder	Portland, Me.; Saccarappa, Me	Oct. 11, 1853.
Books, bound, paging	John McAdams	Boston, Mass	Mar. 29, 1853; antedated Sept. 29, 1852.
Books, curving the backs of	John A. Elder	Saccarappa, Me	July 26, 1853.
Books, paging	Richard M. Leslie	Philadelphia, Pa	Feb. 15, 1853.
Daguerreotype apparatus	James Brown	New York, N. Y	Nov. 15, 1853.
Daguerreotype cases	J. F. Mascher	Philadelphia, Pa	Mar. 8, 1853.
Daguerreotype plate-holders	Marshall Finley	Canandaigua, N. Y	Oct. 4, 1853.
Daguerreotype plates, coating-box for	Wm. Lewis and Wm. H. Lewis	New York, N. Y	Nov. 15, 1853.
Daguerreotyping, mercury baths for	Benjamin Franklin Upton	Bath, Me	April 12, 1853.
Engraving-machine	John B. Blair	Alton, Ill	May 24, 1853.
Envelope-folding machines	R. L. Hawes	Worcester, Mass	June 21, 1853.
Envelopes, machines for folding	Ezra Coleman	Philadelphia, Pa	April 26, 1853.
Ink, printers'. (See Class IV.)			
Inkstand-covers, hinge for	Joseph Nock	Philadelphia, Pa	Dec. 13, 1853.
Melodeons	Horatio N. Goodman	New Haven, Conn	June 28, 1853.
Melodeons and other reed instruments, tuning	E. E. Shepardson and E. Lucas	New Bedford, Mass	June 28, 1853.
Musical reed instruments	James A. Bazin	Canton, Mass	Aug. 2, 1853.
Musical scale, revolving	Samuel D. Tillman	Seneca Falls, N. Y	Nov. 8, 1853.
Paper-cutting machine	H. J. Oerter, assignee of Frederick Hesse	Bethlehem, Pa	July 19, 1853.
Paper files	Daniel Winslow and P. D. Cummings	Portland, Me	Aug. 30, 1853.
Paper files	Hamilton L. Smith, Levi Buttles, and Henry A. Swift, assignees of Hamilton L. Smith.	Cleveland, Ohio; Ravenna, Ohio	June 7, 1853.
Paper-ruling machine	C. S. Boynton	New York, N. Y	Aug. 2, 1853.
Paper, separating by single sheets	John P. Comly	Dayton, Ohio	Mar. 22, 1853.
Pen and pencil-case	Gilbert S. Clark	New York, N. Y	Nov. 1, 1853.
Pen-holders	Ebenezer W. Hanson	Spring Garden, Philadelphia, Pa	Dec. 6, 1853.
Pens, gold	E. H. Bard and H. H. Wilson	Philadelphia, Pa	Dec. 20, 1853.
Pens, metallic	Myer Phineas	New York, N. Y	July 12, 1853.
Pens, metallic	William H. Towers	Philadelphia, Pa	Nov. 1, 1853.
Pens, metallic-pointed	Benjamin R. Norton	Syracuse, N. Y	June 21, 1853.
Piano-fortes	Benjamin E. Colley	Cambridge, Mass	June 21, 1853.
Piano-fortes	William Compton	New York, N. Y	Sept. 6, 1853.
Piano-fortes, frames of	J. Piffaut	New Orleans, La	Jan. 25, 1853.
Piano-forte hammers covering	Robert Nunns and Jno. Clark, assignees of Rudolph Kroter.	New York, N. Y	Jan. 4, 1853.
Pianos, vertical	Edwin Fobes	Boston, Mass	May 17, 1853.
Pianos, vertical	George Traeyser	Cincinnati, Ohio	Mar. 29, 1853.

Presses, copying	E. H. Smith	New York, N. Y	une 14, 1853.
Printers' rules, machines for cutting and bevelling	Moore and Crosby, assignees of Snow Magoun	Boston, Mass	Aug. 23, 1853.
Printing-presses	Charles Montague	Pittsfield, Mass	Sept. 6, 1853.
Printing-presses	Charles Montague	Pittsfield, Mass	Sept. 6, 1853.
Printing	John W. Middleton, assignee of James Young	Philadelphia, Pa	May 10, 1853; antedated Nov. 10, 1852.
Printing presses	Jeptha A. Wilkinson	New York, N. Y	Jan. 4, 1853; in England, Sept. 23, 1842.
Printing presses	Joel G. Northrup	Syracuse, N. Y	Aug. 9, 1853.
Printing presses	John Lewis	Buffalo, N. Y	Aug. 9, 1853.
Printing presses	Seth Adams	Boston, Mass	Mar. 8, 1853.
Printing presses	Stephen P. Ruggles	Boston, Mass	Aug. 2, 1853; antedated Feb. 2, 1853.
Printing presses	Victor Beaumont	New York, N. Y	Sept. 6, 1853.
Printing presses, power	William H. Danforth	Salem, Mass	June 21, 1853.
Printing presses, registering apparatus for	John W. Richards	Hoboken, N. J	May 10, 1853.
Stamping patterns on rollers, machine for	James Baxendale	Providence, R. I	Dec. 20, 1853.
Stereotype plates, compounds for	John L. Kingsley	New York, N. Y	Jan. 18, 1853.
Stereotype plates, moulding, gutta percha	John L. Kingsley	New York, N. Y	June 14, 1853.
Type-casting machines	John J. Sturgis	New York, N. Y	June 14, 1853.
Type, distributing and composing-machine for	William H. Mitchel	Brooklyn, N. Y	Aug. 30, 1853.
Type, elastic, for printing on irregular surfaces	G. G. Wells, assignee of Julius Herriet	Hartford, Conn.; New York, N. Y	Aug. 2, 1853.
Violins	Moses Coburn	Savannah, Ga	May 17, 1853.
Violins, &c.	Cornelius S. Cooper	New York, N. Y	Nov. 8, 1853.
Violins, keyed finger-board for	William Robertson	New York, N. Y	Nov. 8, 1853.

CLASS XIX.—FIRE-ARMS AND IMPLEMENTS OF WAR, *and parts thereof, including the manufacture of shot and gunpowder.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Cannon and other fire-arms, manufacture of	Charles W. Lancaster	Middlesex County, England	July 5, 1853; in England, Jan. 16, 1851.
Cannon, boring	William F. Lucas, admin. of L. A. B. Walbach	Pikesville, Md	Aug. 23, 1853.
Cannon, sight	John A. Wagener	Charleston, S. C	Mar. 8, 1853.
Fire-arms	George Leonard	Shrewsbury, Mass	Aug. 9, 1853.
Fire-arms, breech-loading	J. P. Schenkl and A. S. Saroni, assignees of John P. Schenkl.	Boston, Mass	Aug. 16, 1853.
Fire-arms, discharging breech-loading	Henry Stanton, U. S. Army	Kings County, N. Y	Aug. 16, 1853.
Fire-arms, repeating	Charles N. Tyler	Worcester, Mass	May 3, 1853.
Fire-arms, repeating	Massachusetts Arms Company, assignees of Joshua Stevens.	Chicopee, Mass	Aug. 9, 1853.
Fire-arms, revolving	Morgan L. Rood	Marshall, Mich	Nov. 22, 1853.
Fire-arms, revolving	Robert Adams	London, England	May 3, 1853; in England, Feb. 24, 1851.
Gun-barrels, twisted, process for making	Thomas Warner	Chicopee, Mass	Sept. 6, 1853.

Classified list of patents issued.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Guns, magazine	Edmund H. Graham	Biddeford, Me	Oct. 4, 1853.
Locks, gun	P. F. Charpie	Mount Vernon, Ohio	Aug. 16, 1853.
Percussion caps, facing ends of	Joseph Goldmark	New York, N. Y	Nov. 22, 1853.
Percussion pellets	Christian Sharps	Hartford, Conn	June 28, 1858; in England, April 22, 1852.
Shot-chargers	Chauncey W. Camp	Hartford, Conn	July 12, 1853.

Class XX.—Surgical and medical instruments, *including trusses, dental instruments, bathing apparatus, &c.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Bath, shower, tables	Cyrus C. Bisbee	Rochester, N. Y	July 26, 1853.
Bathing-tubs	Jordan L. Mott	New York, N. Y	Sept. 27, 1853.
Braces, body	G. S. Browne	Hartford, Conn	Nov. 22, 1853.
Chair, invalid locomotive	Thomas S. Minniss	Meadville, Pa	May 10, 1853.
Clavicle-adjuster	Almiron M. Day	Bennington, Vt	July 5, 1853.
Crutches	John S. Gallaher, jr	Washington, D. C	Jan. 4, 1853.
Ear, &c., surgical instruments for examining the	H. Le Riemondie	New Orleans, La	Feb. 8, 1853; antedated Oct. 23, 1852.
Elastic exercising machine	Richard L. Hinsdale	New York, N. Y	May 3, 1853.
Gold, processes for preparing (for filling teeth). (See Class II.)			
Spine, instruments for correcting lateral deviations of the	Alanson Abbé	Boston, Mass	July 5, 1853.
Supporters, abdominal	H. B. Conant	Geneva, Wis	Aug. 2, 1853.
Syringes, shower	Ira Warren	Boston, Mass	Dec. 6, 1853.
Teeth, artificial	Louis F. Sheppard	Alhambra, Ill	Feb. 15, 1853.
Teeth, artificial, attaching to the metallic plate	Henry S. Crider and David Williams	Lancaster, Ohio	Oct. 18, 1853.
Trusses	John North	Middletown, Conn	July 5, 1853.
Turnkeys	Melvin Jinks	Wayland, N. Y	Dec. 18, 1853.

CLASS XXI.—WEARING APPAREL, ARTICLES FOR THE TOILET, &c., *including instruments for manufacturing.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Cloth-cutting, implements for	Geo. W. Griswold	Carbondale, Pa.	Oct. 18, 1853.
Combs, pocket	William J. Thorn	Westbrook, Me.	May 17, 1853.
Cutters, graduated, for cloth and other substances	Halsey D. Walcott	Boston, Mass.	May 17, 1853.
Hat-bodies, machines for planking	Phineas Emmons	New York, N. Y.	April 19, 1853.
Hooks and eyes to cards, attaching	Charles Atwood	Birmingham (Derby), Conn.	Dec. 20, 1853.
Razor-straps	Alfred F. Chatman	New York, N. Y.	Sept. 20, 1853.
Toilet furniture	David Freed	Huntingdon, Pa.	Sept. 20, 1853.
Umbrellas and parasols	Samuel Fox	Sheffield, England	May 17, 1853; in England, April 6, 1852.
Umbrellas, cotton, mode of fixing the colors of	Norman Cook	New York, N. Y.	Dec. 13, 1853.
Wearing apparel, &c., seamless felt, manufacture of	Sam'l M. Perkins	Springfield, Pa.	Jan. 25, 1853.
Wigs, manufacture of	Thomas C. Weildon	Hartford, Conn.	July 19, 1853.
Wigs, manufacturing	Charles Bourgard	New York, N. Y.	Jan. 25, 1853.

CLASS XXII.—*Miscellaneous.*

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Annunciators, electro-magnetic	Charles S. Bulkley	New York, N. Y.	Nov. 15, 1853.
Annunciators for hotels	William Horsfall	New York, N. Y.	Oct. 4, 1853.
Bells, fixed, mode of ringing	Alfred Carson	New York, N. Y.	Dec. 6, 1853; antedated June 6, 1853.
Bottle-fastenings	William Spratt	Cincinnati, Ohio	Sept. 6, 1853.
Bottle-stoppers	Charles T. Kipp, assignee of Walter Hunt	New York, N. Y.	Jan. 4, 1853.
Bottles, valve gauge for	Alphonse Quantin	Philadelphia, Pa.	Oct. 25, 1853.
Broom-handles, machine for sawing sticks for	Thomas J. Alexander	Westerville, Ohio	Sept. 20, 1853.
Burglar alarms	Josiah Norcross, assignee of Edward Brown	South Reading, Mass.; Rindge, N. H.	Oct. 4, 1853.
Cards, business, boxes for supplying	William and William H. Lewis	New York, N. Y.	Nov. 22, 1853.
Chairs, step, library	Augustus Eliaers	Boston, Mass.	Oct. 25, 1853.
Coin, counterfeit, detectors	Gideon B. Smith	Baltimore, Md.	Sept. 6, 1853.
Coin-safe and detector	H. G. Robinson	Schuylkill Haven, Pa.	July 12, 1853.
Coin-safe and detector	Jacob J. Hatcher	Spring Garden, Pa.	April 12, 1853.
Crow killer	Noah J. Tilghman	Salisbury, Md.	July 5, 1853.
Folding Seidlitz powders, machine for	W. Watson and P. Vanzant, assignees of Wm. A. Martin.	New York, N. Y.; Brooklyn, N. Y.	Dec. 20, 1853.
Ice, manufacturing	Alexander C. Twining	Middlebury, Vt.	Nov. 8, 1853; in England, July 3, 1850.

Classified list of patents issued.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Knives, table, attaching handles to the blades of. (See Class II.)			
Match-splint machines. (See Class XIV.)			
Ten-pins, setting up and returning balls	Geo. W. Eichell	New York, N. Y	Aug. 9, 1853.
Water-closets	H. Goldsmith, jr.	New York, N. Y	June 7, 1853.
Waxed ends, machines for twisting	Daniel H. Hovey	Kilborn, Ohio	June 28, 1853.

EXTENSIONS FOR 1853.

Inventions or discoveries.	Patentees.	Residence.	Date of extension.	Date of patent.
Axles and gudgeons, boxes for, mode of making	Isaac Babbitt	Roxbury, Mass	July 8, 1853	July 17, 1839.
Blowers, fan, construction of	F. P. Dimpfel	Philadelphia, Pa	Dec. 27, 1853	Dec. 28, 1839.
Boilers, steam, and apparatus to be used on board of steamboats to prevent the explosion of boilers.	Cadwallader Evans	Pittsburg, Pa	April 14, 1853	April 15, 1839.
Bridge, wooden-framed suspension	Stephen H. Long	Louisville, Ky	Nov. 5, 1853	Nov. 7, 1839.
Excavator, crane, for excavating and removing earth	Elizabeth Otis, adm'x Wm. S. Otis	Canton, Mass	Feb. 23, 1853	Feb. 24, 1839.
Furnaces for economizing fuel and consuming smoke	Frederick P. Dimpfel	Philadelphia, Pa	May 7, 1853	May 9, 1839.
Furnaces for smelting iron ore, construction of	J. Augustus Roth	Fairmount, Pa	Oct. 18, 1853	Oct. 31, 1839.
Rakes	Hezekiah Haynes	Middletown, Vt	June 17, 1853	June 18, 1839.
Ships, galley for the distillation of salt water	Enoch Hutchinson	New York, N. Y	May 19, 1853	May 20, 1839.
Smut-machines	Leonard Smith	Troy, N. Y	Oct. 18, 1853	Oct. 18, 1839.
Sockets for holding tools, mode of constructing	Herrick Aiken	Franklin, N. H	Dec. 26, 1853	Dec. 29, 1839.
Stoves, cooking	Desire Buck, adm'x of Darius Buck	Albany, N. Y	May 19, 1853	May 20, 1839; reissued Aug. 27, 1850.

ADDITIONAL IMPROVEMENTS GRANTED DURING THE YEAR 1853.

Inventions or discoveries.	Patentees.	Residence.	Date of improvement.	Date of patent.
Grain, machines for separating straw from	Elisha S. Snyder	Charlestown, Va	Aug. 23, 1853	June 13, 1848.
Pianos, organ	Rufus Nutting, 2d	Hudson, Ohio	Feb. 8, 1853	Feb. 8, 1848.
Winnowers and threshers	George F. S. Zimmerman	Charlestown, Va	Sept. 13, 1853	Feb. 8, 1853.

DISCLAIMERS ENTERED DURING THE YEAR 1853.

Inventions or discoveries.	Patentees.	Residence.	Disclaimer entered.	Date of patent.
Fire-arms	Samuel Colt	Hartford, Ct	Aug. 8, 1853	Aug. 29, 1839.
Lampblack	R. S. Child, assignee of John G. Mini	Gloucester Co., N. J.; Philadelphia, Pa	Jan. 19, 1853	Aug. 24, 1852.
Mouldings, wood, machines for making	Jno. Lawrence, assignee of A. T. Serrel	New York, N. Y	Mar. 29, 1853	May 16, 1848.
Presses, seal	James Foster (patent of Foster & Evans)	Cincinnati, Ohio	Aug. 24, 1853	June 28, 1853.
Spark-arresters	Bennett, Radley & Hunter, assignees of Wm. C. Grimes.	New York, N. Y	Mar. 19, 1853	Feb. 12, 1852.

REISSUES DURING THE YEAR 1853.

Inventions or discoveries.	Patentees.	Residence.	Date of reissue.	Date of patent.
Books, machines for trimming the edges of	Larnard F. Markham	Cambridgeport, Mass	April 19, 1853	April 18, 1848.
Brakes for railroad cars, mode of operating	Nehemiah Hodge	North Adams, Mass	Mar. 1, 1853	Oct. 2, 1849.
Composition for stereotype plates	L. Westbrook, assignee of Josiah Warren	New York, N. Y; Long Island, N. Y	July 26, 1853	April 25, 1846.
Compounds, lubricating	Patrick S. Devlan	Reading, Pa	June 14, 1853	Jan. 16, 1849.
Dust, excluding from railroad cars	H. B. Goodyear, adm'r of Nelson Goodyear, assignee of Edward Hamilton.	New York, N. Y.; Bridgeport, Ct	Feb. 15, 1853	May 27, 1851.
Fire-arms, movable breeches for, and appurtenances of the same.	Benjamin Chambers	Washington, D. C	April 19, 1853	July 31, 1849.
——— cannon-lock	Joanna Chambers, assignee of Benjamin Chambers. Separate patent issued upon the surrender for reissue and division of original patent.	Washington, D. C	April 19, 1853	April 31, 1849.
Flouring, process of	David P. Bonnel	Tecumseh, Mich	July 5, 1853	Aug. 14, 1849.
Gas-regulators	Walter Kidder	New York, N. Y	June 28, 1853	Oct. 12, 1852.
Looms, apparatus for operating shuttle-boxes of	J. A. Bowie and Chas. Carr, assignees of Robert B. Goodyear.	Philadelphia, Pa	June 14, 1853	Mar. 13, 1849; antedated Sept. 13, 1848.
Looms, figure power	M. A. Furbush and G. Crompton, assigns. of E. Fessenden, conservator of Wm. Crompton.	Worcester, Mass.; Bristol Co., Mass	Sept. 13, 1853	Nov. 25, 1837; extended April 19, 1851.
Mineral, vitrifiable matter to metal attaching	Thos. G. Clinton, assignee through others of Joshua Laird	Cincinnati, Ohio	Nov. 22, 1853	May 22, 1849.
Mouldings, machinery for making	Alfred T. Serrel	New York, N. Y	June, 21, 1853	May 16, 1848; reissued Jan. 7, 1851.
Mules, self-acting, for spinning	Wanton Rouse	Taunton, Mass	Mar. 15, 1853	Nov. 2, 1852.
Oil-presses	David L. Latourette	St. Louis, Mo	Nov. 22, 1853	Oct. 28, 1851.

Classified list of patents issued.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of reissue.	Date of patent.
Planing-machines	Aretus A. Wilder	Detroit, Mich	Nov. 15, 1853	Dec. 21, 1852; antedated July 17, 1852.
Ranges, cooking	Moses Pond	Boston, Mass	June 7, 1853	Feb. 25, 1851.
Reaping-machines	Cyrus H. McCormick	Chicago, Ill	May 24, 1853	Oct. 23, 1847.
Reaping-machines	William F. Ketchum	Buffalo, N. Y	April 26, 1853	July 10, 1847.
Reaping-machines	William F. Ketchum	Buffalo, N. Y.	Jan. 11, 1853	July 10, 1847; reissued Oct. 21, 1851.
Screw-blanks, machine for arranging and feeding	Thomas J. Sloan	New York, N. Y	Mar. 29, 1853	Feb. 25, 1853.
Spark and gas consumers	David Matthew	Philadelphia, Pa	Oct. 4, 1853	Feb. 20, 1849.
Splints for fractures	Adam Hays	Pittsburg, Pa	Mar. 8, 1853	Aug. 13, 1850.
Vessels, apparatus for discharging water from the holds of.	Nehemiah Hodge	North Adams, Mass	Feb. 1, 1853	Oct. 19, 1852.

DESIGNS.

Designs.	Patentees.	Residence.	Date of patent.
Bedstead	John H. Barth	Indianapolis, Ind	Oct. 4, 1853.
Bust of Daniel Webster	Thomas Ball	Boston, Mass	April 19, 1853.
Clock-case front	Charles Chinnock	New York, N. Y	April 19, 1853.
Clock-case front	Charles Chinnock	New York, N. Y	April 19, 1853.
Clock-case front	Charles Chinnock	New York, N. Y	April 19, 1853.
Coffins, metallic	Theodore J. Gillies	Williamsburg, N. Y	Oct. 11, 1853.
Combs for ladies' hair	Jeremiah Hill	Newtown, Conn	April 26, 1853.
Cradle	Alexander Edmonds	Mount Pulaski, Ill	Feb. 22, 1853.
Girandoles, candelabra, &c	Robert E. Dietz	New York, N. Y	April 26, 1853.
Grate frame	James L. Jackson	New York, N. Y	May 3, 1853.
Grate frame	James L. Jackson	New York, N. Y	May 3, 1853.
Grate frame	James L. Jackson	New York, N. Y	May 3, 1853.
Grate frame and summer piece	James L. Jackson	New York, N. Y	May 3, 1853.
Milk-stool frame	P. A. Palmer	Leroy, N. Y	Aug. 30, 1853.
Register	Wm. W. and C. M. Atkins, assignees of Joseph A. Read.	Philadelphia, Pa	Oct. 25, 1853.
Register face	Albert G. Bristol, assignee of Jas. Cowles	Rochester, N. Y	June 28, 1853.
Range, cooking	North, Chase, and North, assignees of Reuben H. N. Bates.	Philadelphia, Pa.; Providence, R. I	July 26, 1853.

Range, portable	C. W. Warnick and F. Leibrandt, assignees of Jno. C. Smith.	Philadelphia, Pa.	April 26, 1853.
Range, portable	North, Chase, and North, assignees of G. Smith and H. Brown.	Philadelphia, Pa.	April 26, 1853.
Sewing-bird	A. Gerould and J. H. Ward	Middletown, Conn.	Aug. 2, 1853.
Sewing-bird	Charles Waterman	Meriden, Conn	Feb. 15, 1853.
Sewing-bird	Julius E. Merriman	New Haven, Conn.	July 26, 1853.
Sewing butterfly	John Lane	New Haven, Conn.	Nov. 8, 1853.
Statue of Daniel Webster	G. W. Nichols, assignee of Thomas Ball	Boston, Mass.	Aug. 9, 1853.
Stove	Abbott and Lawrence, assignees of S. H. Sailor	Philadelphia, Pa.	Aug. 23, 1853.
Stove	C. W. Warnick and F. Leibrandt, assignees of Garrettson Smith and Henry Brown.	Philadelphia, Pa.	Oct. 4, 1853.
Stove	D. F. Goodhue, assignee of Hosea H. Huntley	Cincinnati, Ohio	July 26, 1853.
Stove	North, Chase, and North, assignees of S. W. Gibbs.	Philadelphia, Pa.	Sept. 6, 1853.
Stove	North, Chase, and North, assignees of G. Smith and H. Brown.	Philadelphia, Pa.	Oct. 4, 1853.
Stove	North, Chase, and North, assignees of G. H. Tryday.	Philadelphia, Pa.	Oct. 4, 1853.
Stove, coal, cylinder	J. Wager, V. Richmond, and H. Smith	Troy, N. Y.	Dec. 20, 1853.
Stove, cook	A. and J. Cox, assignees of E. Bolton	Philadelphia, Pa.	June 21, 1853.
Stove, cook	C. and S. Gilbert, assignees of Frederick Schultz.	Philadelphia, Pa.	Aug. 30, 1853.
Stove, cook	John T. Davy	Troy, N. Y.	June 21, 1853.
Stove, cook	Johnson, Cox, and Fuller, assignees of Samuel Pierce and J. J. Dulley.	Troy, N. Y.	July 12, 1853.
Stove, cook	N. S. Vedder	Troy, N. Y.	June 28, 1853.
Stove, cooking	A. and J. Cox, assignees of Wm. P. Gray	Philadelphia, Pa.	Sept. 6, 1853.
Stove, cooking	A. Bradley, assignee of Jos. G. Lamb	Cincinnati, Ohio	Jan. 25, 1853.
Stove, cooking	A. J. Gallagher and Jno. J. Baker	Philadelphia, Pa.	May 31, 1853.
Stove, cooking	Bowers, Pratt & Co., assignees of Jos. Pratt	Boston, Mass.	Jan. 25, 1853.
Stove, cooking	C. W. Warnick and F. Leibrandt, assignees of Samuel H. Sailor.	Philadelphia, Pa.	April 19, 1853.
Stove, cooking	C. W. Warnick and F. Leibrandt, assignees of Samuel H. Sailor.	Philadelphia, Pa.	April 26, 1853.
Stove, cooking	D. F. Goodhue, assignee of H. H. Huntley	Cincinnati, Ohio	July 26, 1853.
Stove, cooking	D. F. Goodhue, assignee of H. H. Huntley	Cincinnati, Ohio	Oct. 4, 1853.
Stove, cooking	Edward F. Robinson	Boston, Mass.	May 10, 1853.
Stove, cooking	Hartshorn, Ames & Co., assignees of W. Ames.	Nashua, N. H.	Dec. 20, 1853.
Stove, cooking	Jas. Greer & Co., assign. of John W. Van Cleve.	Dayton, Ohio	Aug. 16, 1853.
Stove, cooking	Jas. K. Griffin, assignee of John Saby, jr	Waterdown, Canada West; Rochester, N.Y.	June 21, 1853.
Stove, cooking	J. G. Abbott and A. Lawrence, assignees of Samuel H. Sailor.	Philadelphia, Pa.	May 10, 1853.
Stove, cooking	J. G. Abbott and A. Lawrence, assignees of J. Holzer.	Philadelphia, Pa.	Aug. 2, 1853.
Stove, cooking	J. H. Holden, agent High-street Furnace Co., assignee of John Mason.	Providence, R. I.	July 19, 1853.
Stove, cooking	Johnson, Cox, and Fuller, assignees of J. J. Dulley.	Troy, N. Y.	July 19, 1853.
Stove, cooking	North, Chase, and North, assignees of Thomas Barry.	Philadelphia, Pa.; New York, N. Y.	July 26, 1853.

Classified list of patents issued.—Continued.

Inventions or discoveries.	Patentees.	Residence.	Date of patent.
Stove, cooking	North, Chase, and North, assignees of Julius Holzer.	Philadelphia, Pa.	Aug. 2, 1853.
Stove, cooking	North, Chase, and North, assignees of Julius Holzer.	Philadelphia, Pa.	Oct. 4, 1853.
Stove, cooking	N. P. Richardson	Portland, Me.	Oct. 25, 1853.
Stove, cooking	N. S. Vedder	Troy, N. Y.	Nov. 8, 1853.
Stove, cooking	Samuel D. Vose	Albany, N. Y.	June 28, 1853; antedated May 2, 1853.
Stove, cooking	Samuel D. Vose	Albany, N. Y.	June 28, 1853; antedated May 2, 1853.
Stove, cooking	Samuel D. Vose	Albany, N. Y.	June 28, 1853; antedated May 2, 1853.
Stove, cooking	Simeon F. Moore	Batavia, N. Y.	Nov. 29, 1853.
Stove, cooking	S. S. Jewett and F. H. Root	Buffalo, N. Y.	Jan. 25, 1853.
Stove, cooking	S. S. Jewett and F. H. Root	Buffalo, N. Y.	Jan. 25, 1853.
Stove, cooking	W. P. Cresson & Co., assignees of Jacob Beesley.	Philadelphia, Pa.	April 19, 1853.
Stove, parlor	Abbott and Lawrence, assignees of G. Smith and H. Brown.	Philadelphia, Pa.	Aug. 30, 1853.
Stove, parlor	Elihu Smith	Albany, N. Y.	July 26, 1853.
Stove, parlor	G. W. Eddy, assignee of E. Ripley and N. S. Vedder.	Waterford, N. Y.; Troy, N. Y.	Nov. 8, 1853.
Stove, parlor	Hartshorn, Ames & Co., assignees of W. Ames.	Nashua, N. H.	Nov. 1, 1853.
Stove, parlor	J. Wager, V. Richmond, and H. Smith	Troy, N. Y.	Dec. 20, 1853.
Stove, parlor	Samuel D. Vose	Albany, N. Y.	June 28, 1853; antedated May 2, 1853.
Stove, parlor	Samuel D. Vose	Albany, N. Y.	May 24, 1853.
Stove, parlor	Wm. P. Cresson, assignee of Jas. H. Conklin	Philadelphia, Pa.; New York, N. Y.	Feb. 1, 1853; antedated Dec. 12, 1852.
Stove, wood	S. S. Jewett and F. H. Root	Buffalo, N. Y.	Jan. 25, 1853.
Waffle-baker	Nathaniel Waterman	Boston, Mass.	July 5, 1853.
Water-cooler	E. M. Manigle and Geo. Phipps	Philadelphia, Pa.	April 19, 1853.

ALPHABETICAL LIST OF PATENTEES FOR THE YEAR 1853.

No.	Name of Patentee.	Invention or discovery.	Date.	Class.
9826	Abbé Alanson	Spine, instruments for correcting lateral deviation of the	July 5, 1853	XX.
564	Abbott, J. G., & A. Lawrence, assignees of Samuel H. Sailor	Stove, cooking	May 10, 1853	Design.
588	Abbott, J. G., & A. Lawrence, assignees of J. Holzer	Stove, cooking	Aug. 2, 1853	Design.
592	Abbott, J. G., & A. Lawrence, assignees of S. H. Sailor	Stove	Aug. 23, 1853	Design.
595	Abbott, J. G., & A. Lawrence, assignees of G. Smith and H. Brown	Stove, parlor	Aug. 30, 1853	Design.
	Adams, Augustus, and Philo Sylla. (See Sylla and Adams.)			
10146	Adams, Calvin	Fastener and holder, window-shutter	Oct. 25, 1853	II.
9694	Adams, Robert	Fire-arms, revolving	May 3, 1853; in England, Feb. 24, 1851.	XIX.
9606	Adams, Seth	Printing-presses	Mar. 8, 1853	XVIII.
	Aiken, Herrick	Sockets for holding tools, mode of constructing	Dec. 29, 1851; extended Dec. 26, 1853.	
	Akins, Wm. H. (See W. T. Huntington.)			
	Aldrich, W. B., L. Tyng, and M. Marshall. (See Marshall, Moses.)			
9616	Aldrich, Warren	Lathes, turning	Mar. 15, 1853	XIV.
	Alexander, A., and J. T. Hartupe. (See Hartupe, J. T.)			
10023	Alexander, Thomas J.	Broom-handles, machines for sawing sticks for	Sept. 20, 1853	XXII.
9582	Allen, Horatio, and D. G. Wells	Cut-off gearing, adjustable, for puppet-valve engines	Feb. 15, 1853	VI.
9792	Allen, Horatio, and D. G. Wells	Cut-off for steam-engines	June 21, 1853	VI.
10270	Allen, Samuel F	Lamps, fluid	Nov. 29, 1853	V.
10201	Allen, Samuel S.	Harvesters, grain and grass-cutting, gear of	Nov. 8, 1853	I.
	Allen, William, and James Riley. (See James Riley.)			
9962	Allen, Zachariah	Counterpanes	Aug. 23, 1853	III.
10001	Allison, Thomas	Straw-cutters	Sept. 6, 1853	I.
	Ames, W. (See Hartshorn, Ames & Co.)			
	Ames, W. (See Hartshorn, Ames & Co.)			
10083	Anderson, John E.	Valve, throttle, arrangements	Oct. 4, 1853	VI.
9540	Andrews, Robert W.	Looms, operating the treadles of	Jan. 18, 1853	III.
	Archbald, Josiah W. (See Horace Southmayd.)			
9891	Armstrong, S. T., assignee of Henry Lee Norris	India-rubber, preserving, in the liquid state	July 26, 1853; in England, Feb. 24, 1853; in France, Mar. 13, 1853.	IV.
10329	Armstrong, J. B.	Presses, cotton	Dec. 20, 1853	XII.
	Arnett, C., and S. Green. (See S. Green.)			
9512	Arnold, James P	Hackling flax and hemp, machine for	Jan. 4, 1853	III.
9984	Asbury, James T.	Straw-cutters	Sept. 6, 1853	I.
9836	Ashcroft, Edward H.	Gauges, pressure	July 12, 1853	VI.
606	Atkins, C. M. and William W., assignees of Joseph A. Read	Register	Oct. 25, 1853	Design.
10330	Atwood, Charles	Hooks and eyes to cards, attaching	Dec. 20, 1853	XXI.
9630	Atwood, Luther	Oils, lubricating, preparing	Mar. 29, 1853	IV.

Alphabetical List.—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
9951	Atwood, Luther	Alcohol, processes for purifying	Aug. 23, 1853	IV.
	Babbitt, Isaac	Axles and gudgeons, boxes for, mode of making	July 17, 1839; extended July 8, 1853.	
9944	Babbitt, William H.	Ploughs, hill-side	Aug. 16, 1853	I.
9705	Bachelder, A. G.	Countersinks	May 10, 1853	XIV.
	Bailey, Chas. P. (See Union Patent Sofa and Railroad-car seat Manufacturing Company.)			
	Baird, William. (See John J. Hepworth.)			
9761	Baker, Henry	Motion, converting rotary into reciprocating	June 7, 1853	XIII.
10062	Baker, Joel	Wheels, car	Oct. 4, 1853	X.
	Baker, John J., and A. J. Gallagher. (See Gallagher, A. J.)			
10007	Baldwin, M. W.	Valves, cut-off, for steam-engines, the gear of variable	Sept. 13, 1853	VI.
548	Ball, Thomas	Bust of Daniel Webster	April 19, 1853	Design.
	Ball, Thomas. (See Nicholls, G. W.)			
10174	Ballard, William	Vessels, war, protecting bulwarks for	Nov. 1, 1853	VII.
10348	Bard, Edmund H., and Henry H. Wilson	Pens, gold	Dec. 20, 1853	XVIII.
	Barnard, T. B., & E. R. Hallam. (See Hallam, E. R., & T. B. Barnard.)			
9986	Barnes, James	Leather-straps, edging, machine for	Sept. 6, 1853	XVI.
9852	Barnes, Samuel T.	Candlesticks, press-mould	July 19, 1853	V.
	Barrett & Hubbell. (See Hubbell & Barrett.)			
	Barry, Thomas. (See North, Chase & North.)			
598	Barth, John H.	Bedstead	Oct. 4, 1853	Design.
9813	Bartol, B. H.	Refrigerators for cooling liquids	June 28, 1853; in Cuba, Oct. 8, 1852.	XVII.
	Bassett, Joel R. (See Williams, Jas. B.)			
	Bates, Reuben H. N. (See North, Chase & North.)			
9592	Bates, William G., assignee of Wm. H. Johnson	Sewing-machines	Feb. 22, 1853	III.
10331	Battershall, D. E. & M.	Candle-mould machines	Dec. 20, 1853	IV.
9541	Bauder, Charles L.	Bedstead fastenings	Jan. 18, 1853	XVII.
10332	Baxendale, James	Stamping patterns on rollers, machine for	Dec. 20, 1853	XVIII.
9528	Bayliss, Thomas, and Daniel Williams	Harvesters, rakes to	Jan. 11, 1853	I.
9931	Baynes, G. W., Thos. Hinty, and M. Jackson	Bedstead fastenings	Aug. 16, 1853	XVII.
9892	Bazin, James A.	Musical, reed, instruments	Aug. 2, 1853	XVIII.
9932	Beach, William	Meat-tenderers	Aug. 16, 1853	XVII.
10124	Beard, Ebenezer	Propellers	Oct. 18, 1853	XII.
9987	Beaumont Victor	Printing-presses	Sept. 6, 1853	XVIII.
10147	Beauregard, G. T.	Excavators, bar, self-acting	Oct. 25, 1853	IX.
	Beecher, Orson, and James Black. (See Black & Beecher.)			
	Beesley, Jacob. (See Wm. P. Cresson & Co.)			
9552	Bell, John	Boxes, &c., method of joining corners of	Jan. 25, 1853	XIV.
9766	Belson, R. W.	Stoves, cooking, boilers for	June 7, 1853	V.
10279	Benedict, E. B	Shafts to axles, coupling	Nov. 29, 1853	X.

	Bennett, Radley & Hunter, assignees of Wm. C. Grimes.	Spark-arresters	Feb. 12, 1852; disclaimer, Mar. 19, 1853.	
10063	Benson, Elihu R.	Slat-machine, for window-blinds	Oct. 4, 1853	XIV.
9881	Benton, Ezra R.	Bran-dusters	July 26, 1853	XIII.
9741	Berdan, Hiram	Gold, machines for pulverizing auriferous quartz and amalgamating the.	May 24, 1853	II.
9657	Berlin, William	Harrows	April 12, 1853	I.
10247	Beschke, William	Metallic plates, joining and riveting	Nov. 22, 1853	II.
9607	Bessemer, Henry	Cane-juice evaporators	Mar. 8, 1853; in England, Feb. 24, 1852.	IV.
9608	Bessemer, Henry	Filters for cane-juice	Mar. 8, 1853; in England, Feb. 24, 1852.	IV.
9618	Bessemer, Henry	Sugar-syrup, heaters for	Mar. 15, 1853; in England, Feb. 24, 1852.	IV.
9617	Bessemer, Henry	Sugar-cane juice, machines for expressing	Mar. 15, 1853; in England, Feb. 24, 1852.	IV.
9681	Bessemer, Henry	Sugar-drainers	April 26, 1853; in England, Feb. 24, 1852.	IV.
9519	Bidwell, J. C., and John Hall, executors of Sam'l Hall	Ploughs, hill-side	Jan. 4, 1853	I.
10222	Bigelow, E. B.	Looms for weaving pile fabrics	Nov. 15, 1853	III.
9933	Binder, John	Bedsteads, folding, hinges for	Aug. 16, 1853	XVII.
10224	Birkinbine, Henry P. M.	Valve, supplemental, to the equilibrium-pipe of the Cornish engine.	Nov. 15, 1853	VI.
9873	Bisbee, Cyrus C.	Bath, shower, tables	July 26, 1853	XX.
9622	Black, Horatio N.	Pumps, hydraulic, steam	Mar. 22, 1853	XI.
10024	Black, James	Engine, steam, planetary hydraulic	Sept. 20, 1853	VI.
9553	Black, James, and Orson Beecher	Pumps, steam, diaphragm, working the condenser attached to	Jan. 25, 1853	XI.
9743	Blair, John B.	Engraving-machine	May 24, 1853	XVIII.
9985	Blake, Philos, Eli W., & J. A.	Nut-crackers	Sept. 6, 1853; antedated Mar. 6, 1853.	XVII.
	Blakeslee & Hotchkiss. (See Hotchkiss & Blakeslee.)			
	Blodgett, S. C. (See C. Morey, Henry Edwards, and N. Hunt.)			
	Blood, et al. (See Cummings, et al.)			
9648	Bloodgood, John H.	Yarn, process of forming, by felting	April 5, 1853	III.
10271	Bloom, J.	Smoke and gases, condensing	Nov. 29, 1853	V.
10202	Blue, John	Grain-separators, carriers to	Nov. 8, 1853	I.
	Bogert & Graves. (See Graves & Bogert.)			
	Bollman & Dibben. (See Dibben & Bollman.)			
	Bolton, E. (See A. & J. Cox.)			
	Bolton, James, M. D. (See Yale, C. D.)			
10333	Bolton, James, M. D.	Furnaces, hot-air	Dec. 20, 1853	V.
245	Bonnell, David P.	Flouring, process of	Aug. 14, 1849; reissued July 5, 1853.	
	Boutigny, Pierre H. and J. B. Moinier. (See Moinier and Boutigny.)			
9853	Booth, James C.	Chromates, processes for obtaining	July 19, 1853; antedated Nov. 9, 1852.	IV.
10351	Botter, Andres E.	Bedstead, wardrobe or folding bureau	Dec. 20, 1853	XVII.
9554	Bourgard, Charles	Wigs, manufacturing	Jan. 25, 1853	XXI.
	Boutigny, Pierre H. and J. B. Moinier. (See Moinier, J. B., & P. H. Boutigny.)			
10125	Bowditch, Edwin B.	Beds, sofa	Oct. 18, 1853	XVII.

Alphabetical List.—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
544	Bowers, Pratt & Co., assignees of Joseph Pratt	Stove, cooking	Jan. 25, 1853	Design.
242	Bowie, J. A., & Chas. Carr, assignees of Robert B. Goodyear	Looms, apparatus for operating shuttle-boxes of	Mar. 13, 1849; antedated Sept. 13, 1848; reissued June 14, 1853.	
10025	Boyden, Uriah A.	Turbines	Sept. 20, 1853	XI.
10026	Boyden, Uriah A.	Turbines	Sept. 20, 1853	XI.
10027	Boyden, Uriah A.	Hydraulic motors	Sept. 20, 1853	XI.
9898	Boynton, C. S.	Paper-ruling machine	Aug. 2, 1853	XVIII.
9573	Boynton, Nathaniel A.	Furnaces, hot-air	Feb. 8, 1853	V.
9590	Bradford, H., and E. Fitzgerald	Ores, or other substances of different specific gravities, apparatus for separating.	Feb. 22, 1853	II.
543	Bradley, A., assignee of Joseph G. Lamb	Stove, cooking	Jan. 25, 1853	Design.
9983	Bradway, Abel, assignee of Elijah Valentine	Shingle-machines	Aug. 30, 1853	XIV.
	Branson, Evan H. (See Slaughter, Franklin.)			
9555	Bretney, Henry	Tanning hides and skins	Jan. 25, 1853	XVI.
9742	Brick, Samuel R.	Gas-burners	May 24, 1853	V.
9583	Briggs, John	Car-seats, railroad	Feb. 15, 1853	X.
9631	Briggs, Schuyler, and John G. Talbott	Winnowers of grain	Mar. 29, 1853	I.
10101	Brinckerhoff, Cornelius R.	Ploughs	Oct. 11, 1853	I.
577	Bristol, Albert G., assignee of James Cowles	Register face	June 28, 1853	Design.
9874	Bristol, Richard C.	Engines, rotary, steam	July 26, 1853	VI.
	Brookfield, James M., and Ephraim V. White. (See Hay, A. K., and James M. Brookfield.)			
9854	Brown, Alexander H.	Paddle-wheels for steamers, feathering	July 19, 1853; in England, Mar. 5, 1853.	VII.
	Brown and Smith, assignors to Warnick and Leibrandt. (See Smith and Brown.)			
	Brown and Smith, assignors to North, Chase, and North. (See Smith and Brown.)			
9849	Brown, Charles F.	Propellers, screw, adjustable	July 12, 1853	VII.
9584	Brown, Darius C.	Looms, machines for manufacturing harness for	Feb. 15, 1853	III.
	Brown, Edward. (See Josiah Norcross.)			
9893	Brown, George W.	Planters, seed	Aug. 2, 1853; antedated Feb. 2, 1853.	I.
	Brown, H., and G. Smith, assignors to North, Chase, and North. (See Smith, G., and H. Brown.)			
	Brown, H., and G. Smith, assignors to Abbott and Lawrence. (See Smith, G., and H. Brown.)			
9855	Brown, Isaac	Saws, mode of driving	July 19, 1853	XIV.
10225	Brown, James	Daguerreotype apparatus	Nov. 15, 1853	XVIII.
10320	Brown, John E., and S. S. Bartlett	Harvesters, grain and grass	Dec. 20, 1853	I.
10055	Brown, William	Oil, paraffine, preparing	Sept. 27, 1853	IV.
10248	Browne, Gardner S., M. D.	Braces, body	Nov. 22, 1853	XX.

10064	Bruce, Gardner A	Planters, corn	Oct. 4, 1853	I.
9513	Bruen, J. T., and J. G. Wilson	Stone, machines for sawing	Jan. 4, 1853	XV.
	Buck, Desire, administratrix of Darius Buck, deceased	Stoves, cooking	May 20, 1839; reissued Aug. 27, 1850; extended May 19, 1853.	
	Buffum, Arnold. (See Lynde, John D.)			
10226	Bulkley, Charles S	Annunciators, electro-magnetic	Nov. 15, 1853	XXII.
	Burnap, Caleb B. (See L. F. Robinson.)			
9644	Burrall, Thomas D	Harvesters, grain	April 5, 1853	I.
9875	Burton, William V	Ploughs	July 26, 1853	I.
9658	Bushnell, Edwin L	Mattresses, spring	April 12, 1853	XVII.
10280	Bussell, Erastus T	Springs, combined india-rubber and steel	Nov. 29, 1853	X.
	Butter, John. (See Sully, James, and John Butter.)			
	Buttles, et al. (See Hamilton, L. Smith, assignor.)			
10102	Byram, Henry P	Hullers of grass-seed	Oct. 11, 1853	I.
	Cady and Pierce. (See Rowe, Bradford.)			
9670	Calvert, Francis A	Willowers, feed-motion in	April 19, 1853	III.
9196	Calvert, George	Beehive	Nov. 1, 1853	I.
9837	Camp, Chauncey W	Shot-chargers	July 12, 1853	XIX.
9913	Canby, Samuel	Winnowers of grain	Aug. 9, 1853	I.
10334	Cantel, Lazare	Trunk-frames, metallic	Dec. 20, 1853	XVI.
9585	Carey, Joshua C	Spike-machines, adjustable heading-lever in	Feb. 15, 1853	I.
9882	Carothers, Jacob H	Planters, corn	July 26, 1853	I.
10175	Carpenter, Calvin, jr	Magneto-electric machines	Nov. 1, 1853; in France, April 18, 1853.	VIII.
	Carr and Bowie. (See Robert B. Goodyear.)			
10335	Carrol, David	Shuttles	Dec. 20, 1853	III.
10300	Carson, Alfred	Bells, fixed, mode of ringing	Dec. 6, 1853; antedated June 6, 1853.	XXII.
10249	Carter, Henry, and James Rees	Nut-machine	Nov. 22, 1853; antedated June 3, 1853.	II.
9598	Case, Asa N. and Alden	Bedstead fastenings	Mar. 1, 1853	XVII.
9894	Caswell, Lebbeus	Planters, seed	Aug. 2, 1853	I.
	Chamberlain, Dexter H. (See Howard, Cyrus G.)			
236	Chambers, Benjamin	Fire-arms, movable breeches for, and appurtenances of the same.	July 31, 1849; reissued April 19, 1853.	
237	Chambers, Joanna, assignee of Benjamin Chambers	Cannon-lock	July 31, 1849; reissued April 19, 1853.	
10250	Champion, Samuel and Thomas	Bridges, transporting	Nov. 22, 1853; antedated May 22, 1853.	IX.
9722	Chandler, Thomas A	Pendulum-levels	May 17, 1853	VIII.
9529	Chapin, Nathan	Lathes for turning interior and exterior surfaces	Jan. 11, 1853	XIV.
10281	Chapman, Samuel, jr	Stone-saws	Nov. 29, 1853	XV.
9984	Charpie, P. F	Locks, gun	Aug. 16, 1853	XIX.
	Chase and North. (See Smith, G., and H. Brown.)			
	Chase and North. (See Bates, R. H. N.)			
	Chase and North. (See Gibbs, S. W.)			
	Chase and North. (See Barry, Thomas.)			
	Chase, North, and North. (See G. H. Tryday.)			
	Chase, North, and North. (See Holzer, Julius.)			
	Chase, North, and North. (See Smith and Brown.)			

Alphabetical List.—Continued.

No.	Name of Patentee.	Invention or discovery.	Date.	Class.
9574	Chase, George	Vessels, centre-board and rudder of, for shoal-water	Feb. 8, 1853	VII.
10176	Chatham, A. P.	Car-couplings	Nov. 1, 1853	X.
10028	Chatman, Alfred F	Razor-straps	Sept. 20, 1853	XXI.
10008	Chilcott, John, and Robert Snell	Boots and shoes, india-rubber soles for	Sept. 13, 1853	XVI.
10009	Chilcott, John, and Robert Snell	Boots and shoes, cutting	Sept. 13, 1853; in Belgium, Sept. 16, 1852; in France, Sept. 17, 1852; in England, Sept. 30, 1852.	XVI.
10021	Chilcott, John, and Robert Snell	Boots and shoes, screw fastenings for	Sept. 13, 1853	XVI.
	Child, R. S., assignee of John G. Mini	Lampblack	Aug. 24, 1852; disclaimer, Jan. 19, 1853.	
9564	Childs, Augustus B.	Winnowers of grain	Jan. 25, 1853; in England, May 22, 1852.	I.
550	Chinnock, Charles	Clock-case front	April 19, 1853	Design.
551	Chinnock, Charles	Clock-case front	April 19, 1853	Design.
552	Chinnock, Charles	Clock-case front	April 19, 1853	Design.
	Clark and Sawyer. (See Sawyer and Clark.)			
10177	Clark, Gilbert S.	Pen and pencil-case	Nov. 1, 1853	XVIII.
9514	Clark, James J.	Telegraphic register, self-winding	Jan. 4, 1853	VIII.
10128	Clark, James J.	Telegraphic register, self-winding	Oct. 18, 1853	VIII.
	Clark, John, and Robert Nunns. (See Nunns, Robert, and J. Clark.)			
9814	Clarke, Horatio.	Bobbins	June 28, 1853	III.
9609	Clemens, S. A.	Flax, machines for breaking and dressing	Mar. 8, 1853	III.
10251	Clemens, S. A.	Ventilating railroad cars	Nov. 22, 1853	V.
9895	Clime, Samuel R.	Boilers, steam, apparatus to regulate the supplying of water to	Aug. 2, 1853	VI.
251	Clinton, Thomas G., assignee (through others) of Joshua Laird	Mineral vitrifiable matter to metal, attaching	May 22, 1849; reissued Nov. 22, 1853.	
9723	Coburn, Moses	Violins	May 17, 1853	XVIII.
10306	Cochran, James	Hydrant-valve	Dec. 13, 1853	XI.
9945	Coes, Aury G.	Screw-wrench	Aug. 16, 1853	II.
10122	Coffin, John E., assignee of John A. Elder	Boards, binders', machine for cutting	Oct. 11, 1853	XVIII.
9848	Coffin, Nathan T.	Saws, mill, forming teeth on	July 12, 1853	XIV.
9856	Coffin, Nathan T.	Saws, hanging	July 19, 1853	XIV.
9683	Coleman, Ezra	Envelopes, machines for folding	April 26, 1853	XVIII.
9619	Coleman, William and Stephen G.	Vessels, sail, supporting the topping-lift and peak-halyard block of.	Mar. 15, 1853	VII.
9946	Coleman, William and S. G.	Blocks, ships'	Aug. 16, 1853	VII.
10103	Collan, John B.	Boilers, steam, detachable lining for the fire-boxes of	June 21, 1853	XVIII.
9793	Colley, Benjamin E.	Piano-fortes	Oct. 11, 1853	VI.
	Colt, Samuel	Fire-arms	Aug. 29, 1839; disclaimer, Aug. 8, 1853.	
9632	Colver, Lewis W.	Hemp, machines for breaking	Mar. 29, 1853	III.
9623	Comly, John P.	Paper, separating, by single sheets	Mar. 22, 1853	XVIII.

9936	Compton, William	Piano-fortes	Sept. 6, 1853	XVIII.
10307	Comstock, John	Bit-stocks of braces	Dec. 13, 1853	XIV.
9896	Conant, H. B.	Supporters, abdominal	Aug. 2, 1853	XX.
	Conklin, J. C. (See D. and D. F. Tompkins.)			
	Conklin, James H. (See Cresson, William P.)			
9543	Contner, Joseph	Saddle-trees	Jan. 18, 1853	XVI.
9857	Conway, Charles J.	Lamps	July 19, 1853	V.
9544	Cook, George and David	Saws, &c., driving circular	Jan. 18, 1853	XIV.
9671	Cook, James M.	Cars, railroad, excluding dust from	April 19, 1853	X.
10308	Cook, Norman	Umbrellas, cotton, mode of fixing the colors of	Dec. 13, 1853	XI.
9682	Cook, Samuel	Smut-machines	April 26, 1853	XIII.
10203	Cooper, Cornelius S.	Violins, &c.	Nov. 8, 1853	XVIII.
10178	Cormack, J. W.	Cane and maize-cutters	Nov. 1, 1853	I.
10167	Coughlan, William	Soda-fountains	Oct. 25, 1853.	IV.
9910	Coupier, Theodore, and M. A. C. Mellier	Paper stuff, manufacture of	Aug. 2, 1853; in France, May 7, 1851.	IV.
571	Cox, A. and J., assignees of E. Bolton	Cook-stove	June 21, 1853	Design.
597	Cox, A. and J., assignees of William P. Gray	Stove, cooking	Sept. 6, 1853	Design.
	Cox, Johnson, and Fuller. (See Pierce, Samuel, and J. J. Dulley.)			
	Cox, Johnson, and Fuller. (See Dulley, J. J.)			
10283	Crabtree, John, and Joseph Hopkinson	Packing, tightening of engine and pump-pistons	Nov. 29, 1853	VI.
9645	Crane, John E.	Cable, chain, stopper	April 5, 1853	VII.
10179	Crawford, Benjamin	Engines, steam, condensers for	Nov. 1, 1853	VI.
10321	Creamer, William G.	Brakes, operating by signal-cord	Dec. 20, 1853	X.
10126	Crighton, William	Looms, power, shuttle-motions for	Oct. 18, 1853	III.
9740	Cressler, William	Planters, seed	May 17, 1853	I.
545	Cresson, William P., assignee of James H. Conklin	Stove, parlor	Feb. 1, 1853; antedated Dec. 12, 1852.	Design.
553	Cresson, W. P. & Co., assignees of Jacob Beesley	Stove, cooking	April 19, 1853	Design.
10127	Crider, Henry S., and David Williams	Teeth, artificial, attaching to the metallic plate	Oct. 18, 1853	XX.
10168	Crocker, Nelson	Vessels, attaching the head-cringle to the yards of	Oct. 25, 1853	VII.
9591	Croll, Alexander A.	Gas-meters	Feb. 22, 1853	IV.
	Crompton, William. (See Forbush, M. A., and G. Crompton.)			
	Crosby and Moore. (See Magoun, Snow.)			
10180	Crosby, C. O.	Pins, machines for sticking	Nov. 1, 1853	II.
10181	Crosby, C. O.	Pins, machines for sticking	Nov. 1, 1853	II.
10182	Crosby, C. O.	Pins, machines for sticking	Nov. 1, 1853	II.
9827	Cross, J.	Brushes	July 5, 1853	XVII.
9935	Crossley, Thomas	Carpets, printed	Aug. 16, 1853	III.
	Crowhurst and Spiller. (See Spiller and Crowhurst.)			
10265	Crygier, James H.	Locks, bank	Nov. 22, 1853	II.
	Cummings, Gary, and Hiram Sands. (See Sands and Cummings.)			
	Cummings, P. D., and Dan. Winslow. (See Winslow and Cummings.)			
10269	Cummings, W. B., N. P. Dadman, and C. A. Blood, assignees of W. B. Cummings and N. P. Dadman.	Mill-stones, dressing, machines for	Nov. 22, 1853	XIII.
9720	Da Costa, John C., assignee of James M. Patton and Wm. F. Fergus.	Tongueing, and grooving, and moulding-cutters	May 10, 1853	XIV.
	Dadman, et al. (See Cummings, et al.)			
9515	Dale, John D.	Planing mouldings, machines for	Jan. 4, 1853	XIV.
9516	Dale, John D.	Planing mouldings, machines for	Jan. 4, 1853	XIV.
	Dana, Samuel L. (See Proprietors of Locks and Canals on Merrimack river.)			

Alphabetical List.—Continued.

No.	Name of Patentee.	Invention or discovery.	Date.	Class.
9794	Danforth, William H.	Printing-presses, power	June 21, 1853	XVIII.
9684	Daniels, Reuben	Straw-cutters	April 26, 1853	I.
9976	Darling, Samuel	Metals, apparatus for grinding and shaping	Aug. 30, 1853	II.
10098	Davie, O. J., and Thomas W. Stephens	Punching metal, machines for	Oct. 4, 1853	II.
10104	Davis, Gilman	Engines, locomotive, ash-pans for	Oct. 11, 1853	VI.
10002	Davis, Levis H.	Corn-shellers	Sept. 6, 1853	I.
10292	Davis, John	Electro-magnetic telegraphs, indicating	Dec. 6, 1853	VIII.
10169	Davis, Nathan C.	Planters, seed	Oct. 25, 1853	I.
9883	Davis, Sylvester	Beehives	July 26, 1853	I.
569	Davy, John T.	Stove, cook	June 21, 1853	Design.
10148	Dawes, Ezra H.	Fork, dung, devices of a convertible	Oct. 25, 1853	I.
9828	Day, A. M.	Clavicle adjuster	July 5, 1853	XX.
10092	Dean, William C.	Wheels, guide for dowelling felloes for	Oct. 4, 1853	X.
10336	D'Homergue, John	Brakes, car	Dec. 20, 1853	X.
9936	Delano, Benjamin F.	Rudder-brace	Aug. 16, 1853	VII.
10183	Demarest, David	Hose-protector	Nov. 1, 1853	XI.
10010	Demeure, Pierre, and Auguste Mauritz	Bed-bottoms	Sept. 13, 1853	XVII.
	De Puy, Wm. H., and John D. Filkins. (See Filkins and De Puy.)			
9885	Deschamps, F. O.	Lanterns, omnibus	July 26, 1853	V.
241	Devlan, Patrick S.	Compounds, lubricating	June 16, 1849; reissued June 14, 1853.	
9914	Dibben, F., and L. Bollman	Gearing, multiplying	Aug. 9, 1853	XIII.
10058	Dick, James M.	Switches, railroad	Sept. 27, 1853	IX.
9888	Dickey, E. J.	Butter-workers	July 12, 1853	XVII.
10003	Dickinson, Porter	Corn-shellers	Sept. 6, 1853	I.
10065	Dickson, A. A.	Cotton in the field, machines for topping	Oct. 4, 1853	I.
555	Dietz, Robert E.	Girandoles, candelabra, &c	April 26, 1853	Design.
9839	Dimmock, George M.	Pendulum, apparatus for illustrating the motion of a, upon the earth's surface.	July 12, 1853	VIII.
	Dimpfel, Frederick P.	Furnaces for economizing fuel and consuming smoke	May 9, 1839; extended May 7, 1853.	
10149	Dimpfel, Frederick P.	Propelling vessels	Oct. 25, 1853	VII.
	Dimpfel, F. P.	Blowers, fan, construction of	Dec. 28, 1839; extended Dec. 27, 1853.	
9915	Dodge, Daniel, and P. Burgess	Boats, life	Aug. 9, 1853	VII.
9777	Dodge, Levi P. and Wm. F.	Pumps	June 7, 1853	XI.
9706	Dodge, Nehemiah	Pump-valves	May 10, 1853	XI.
9744	Dodge, Thomas H.	Kettle-bails	May 24, 1853	V.
9967	Drake, Oliver P.	Benzole vapor apparatus	Aug. 30, 1853	IV.
9815	Duckworth, Christopher	Looms, shuttle-box motion in	June 28, 1853	III.
9953	Duff, James B.	Soap-cutting machines	Aug. 23, 1853	IV.
10105	Dugdale, Samuel G.	Gates, apparatus for opening and closing	Oct. 11, 1853	IX.
9762	Dugdale, Thomas A.	Washing-machines	June 7, 1853	XVII.

	Dulley, J. J. (See Johnson, Cox & Fuller.)			
	Dulley, J. J., and S. Pierce. (See Pierce & Dulley.)			
9884	Durkee, Ziba	Smut-machines, beaters of	July 26, 1853	XIII.
9966	Dyott, M. B.	Furnaces, hot-air	Aug. 30, 1853	V.
9937	Dyott, Michael B.	Buildings, facing	Aug. 16, 1853	IX.
608	Eddy, G. W., assignee of E. Ripley and N. S. Vedder	Stove, parlor	Nov. 8, 1853	Design.
9897	Eddy, Thomas J.	Wheels, railroad car	Aug. 2, 1853	X.
547	Edmonds, Alexander	Cradle	Feb. 22, 1853	Design.
	Edwards, Henry. (See Blodgett, S. C.)			
10282	Edwards, Richard	Ores, machines for washing	Nov. 29, 1853	II.
9916	Eichell, George W.	Ten-pins, setting up and returning balls	Aug. 9, 1853	XXII.
9795	Elder, John A.	Looms, jacquard, apparatus of	June 21, 1853	III.
9886	Elder, John A.	Books, curving the backs of	July 26, 1853	XVIII.
10150	Eliaers, Augustus	Lounges	Oct. 25, 1853	XVII.
10151	Eliaers, Augustus	Chairs, step library	Oct. 25, 1853	XXII.
10227	Elliot, Joseph D.	Staves, machine for dressing	Nov. 15, 1853	XIV.
9767	Ellsworth, Oliver	Bolts, knob, operating and locking	June 7, 1853	II.
9672	Emmons, Phineas	Hat-bodies, machines for planking	April 19, 1853	XXI.
9633	Ennis, William	Furnaces, hot-air	Mar. 29, 1853	V.
9624	Enos, Roswell, and Bela T. Hunt	Tanning	Mar. 22, 1853	XVI.
	Evans, Cadwallader	Boilers, steam, and apparatus to be used on board of steam-boats, to prevent the explosion of boilers.	April 15, 1839; extended April 14, 1853.	XVII.
9707	Evans, Evan L.	Washing-machines	May 10, 1853	XIV.
10304	Evans, R. M., and Asa Weeks, assignees of R. M. Evans	Planing mouldings, cutters for	Dec. 6, 1853	III.
	Evens, Platt, jr. (See Foster, J., jr., and Platt Evens, jr.)	Looms, jacquard, harness-boards for	Jan. 18, 1853	XI.
9545	Everett, Edward, and Samuel T. Thomas	Hose-coupling	June 7, 1853	X.
	Faatz, et al. (See Brookfield and White.)	Wheels, car	Sept. 27, 1853	VIII.
9768	Falconer, Ralph James	Galvanic batteries, porous cells for	Jan. 11, 1853	VIII.
10057	Fales, Daniel P	Electric telegraphs	Mar. 29, 1853	X.
9530	Farmer, Moses G.	Wheels, car	Nov. 1, 1853	V.
9634	Farmer, Moses G.	Safes, fire-proof, lining for	July 19, 1853	VI.
10184	Farnsworth, Joseph	Engines, steam, regulating the speed of	Nov. 1, 1853	X.
9861	Farrel, John	Car-seats, railroad	Sept. 20, 1853	I.
10185	Faught, Luther R.	Grain-washers	Jan. 4, 1853	XII.
10029	Fay, Isaac	Weighing, pendulum-balance for quick	Mar. 29, 1853	XVII.
9517	Feaga, George and George W	Apples, machines for paring	Jan. 25, 1853	I.
9635	Fenn, Benjamin	Ploughs, attaching horses to	Oct. 25, 1853	V.
9558	Fenwick, S. E., and H. F. Wilson, assignees of W. H. Lazelle	Stoves, cooking	June 14, 1853	IX.
	Fergus, Wm. F., and James M. Patton. (See Patton and Fergus.)	Gates, farm, hanging	Feb. 8, 1853	V.
10153	Filkins, J. D., and Wm. H. De Puy	Stove-pipe collar	Aug. 30, 1853	XVIII.
9788	Filley, Giles F	Daguerreotype-plate holder	Oct. 4, 1853	II.
9576	Filson, John	Anvils, apparatus for polishing	Oct. 4, 1853	XIV.
9968	Finch, R. R., jr.	Tenons, mode of cutting	June 14, 1853	
10093	Finley, Marshall	Steering-apparatus	Oct. 18, 1853	VII.
10006	Fisher, M., and John H. Norris	Leather, machines for rubbing and polishing	Oct. 4, 1853	XVI.
9778	Fitch, Charles B	Cars, replacing upon railroad tracks	Dec. 6, 1853	X.
	Fitzgerald, E., and H. Bradford. (See Bradford, H., and E. Fitzgerald.)			
10129	Flanders, Charles			
10067	Flanders, Joseph F.			
10001	Flanders, Lucian B.			

Alphabetical List.—Continued.

No.	Name of Patentee.	Invention or discovery.	Date.	Class.
10152	Flanders, Wooster A	Beehives	Oct. 25, 1853	I.
9745	Fletcher, John C	Stoves, radiators for	May 24, 1853	V.
9724	Fobes, Edwin	Pianos, vertical	May 17, 1853	XVIII.
	Foreman, Jonathan, administrator of E. W. Foreman. (See Sears, Henry B.)			
10120	Foreman, Yelland	Boats, life	Oct. 11, 1853	VII.
	Foster and Sargent. (See Pratt, E. L.)			
9823	Foster, J., jr., and Platt Evens, jr.	Presses, &c., metallic boxes for	June 28, 1853; disclaimer Aug. 24, 1853.	XII.
	Foster, James. (See Foster and Evens.)	Presses, seal	June 28, 1853; disclaimer Aug. 24, 1853.	
9725	Fox, Samuel	Umbrellas and parasols	May 17, 1853; in England, April 6, 1852.	XVIII.
10337	Frankenberg, Alexander	Soda-water fountains	Dec. 20, 1853	IV.
10322	Franklin, Benjamin H	Forks, manure and other	Dec. 20, 1853	I.
10130	Frazee, Benjamin	Saws, mill, mode of operating	Oct. 18, 1853	XIV.
10266	Frazee, Lawrence F	Boat, life	Nov. 22, 1853	VII.
10030	Freed, David	Toilet furniture	Sept. 20, 1853	XXI.
9796	Freeman, E. L	Cultivators, bog-cutting	June 21, 1853	I.
9531	Frost, Pinckney	Scythe-fastenings	Jan. 11, 1853	I.
10228	Fruit, Franklin	Barrel-heads, chuck for cutting	Nov. 15, 1853	XIV.
	Fuller, Cox, and Johnson. (See Dulley, J. J.)			
	Fuller, Johnson, and Cox. (See Pierce and Dulley.)			
9659	Fulton, H. L	Smut-machines	April 12, 1853	XIII.
9840	Fulton, John J	Tanning	July 12, 1853	XVI.
247	Furbush, M. A., and G. Crompton, assignees of E. Fessenden, conservator of Wm. Crompton.	Looms, figure, power	Nov. 25, 1837; extended April 9, 1851; reissued Sept. 13, 1853.	
	Furnace Co., High-street, J. H. Holden, agent. (See Mason, John.)			
568	Gallagher, A. J., and John J. Baker	Stove, cooking	May 31, 1853	Design.
9518	Gallaher, John S., jr	Crutches	Jan. 4, 1853	XX.
9947	Gallahue, Alpheus C	Boots and shoes, machines for pegging	Aug. 16, 1853; antedated Feb. 18, 1853.	XVI.
9769	Gardiner, P. G	Gold amalgamator, arrangement of quartz pulverizer and	June 7, 1853	II.
9610	Gardiner, Samuel, jr	Magnetic-machine for washing and separating gold	Mar. 8, 1853	VIII.
9954	Gardner, Morris J	Engines, oscillating steam	Aug. 23, 1853	VI.
10352	Garlick, Isaac D	Weighing grain, self-acting machine for	Dec. 20, 1853	XII.
9636	Garretson, Isaac H	Planters, seed	Mar. 29, 1853	I.
9938	Geaheart, Aaron W	Spoke-timber, machines for preparing	Aug. 16, 1853	XIV.
10204	Gear, Nathaniel	Turning or cutting irregular forms, machine for	Nov. 8, 1853	XIV.
9532	George, Ammi M	Saws, circular, mode of operating	Jan. 11, 1853	XIV.
	George, Dennis J., and Norman Millington. (See Millington and George.)			

589	Gerould, A., and J. H. Ward	Sewing-bird	Aug. 2, 1853	Design.
10068	Gibbs, Joshua	Grinding plough-castings, machine for	Oct. 4, 1853	IL
	Gibbs, S. W. (See North, Chase, and North.)			
10229	Gilbert, Banford	Propellers	Nov. 15, 1853	VII.
10118	Gilbert, Banford	Griddles	Oct. 11, 1853	XVII.
594	Gilbert, C. and S., assignees of Frederick Schultz	Stove, cook	Aug. 30, 1853	Design.
604	Gillies, Theodore J	Coffins, metallic	Oct. 11, 1853	Design.
9583	Gilliland, John L	Glass, fire-polishing	Jan. 11, 1853	XV.
9726	Gilliland, Lewis L., and J. R. Wagoner	Bedsteads, sofa	May 17, 1853	XVII.
10230	Gilson, Leonard	Sash, &c., circular, machine for dressing	Nov. 15, 1853	XIV.
10223	Gledhill, John	Looms, power	Nov. 15, 1853	III.
10302	Glenn, James	Clocks, illuminated	Dec. 6, 1853	VIII.
10323	Goble, Uriah H	Harvesters, grain and grass	Dec. 20, 1853	I.
10262	Goldmark, Joseph M. D	Percussion caps, facing ends of	Nov. 22, 1853	XIX.
9770	Goldsmith, H., jr	Water-closets	June 7, 1853	XXII.
10293	Goodfellow, Simeon	Screw-cutting dies in the die-stock, arrangement of	Dec. 6, 1853	II.
584	Goodhue, Daniel F., assignee of Hosea H. Huntley	Stove	July 26, 1853	Design.
585	Goodhue, Daniel F., assignee of Hosea H. Huntley	Stove, cooking	July 26, 1853	Design.
602	Goodhue, Daniel F., assignee of Hosea H. Huntley	Stoves, cooking	Oct. 4, 1853	Design.
9816	Goodman, Horatio N	Melodeons	June 28, 1853	XVIII.
10106	Goodyear, Charles	Gutta percha and caoutchoue, covering metals with	Oct. 11, 1853; in England, Mar. 4, 1851.	IV.
9668	Goodyear, C., assignee of Chas. Goodyear and Robt. Hea ing	Gutta percha and india-rubber, manufacturing	April 12, 1853; in England, Mar. 4, 1851.	IV.
230	Goodyear, H. B., administrator of Nelson Goodyear assignee of Edward Hamilton.	Dust, excluding from railroad cars	May 27, 1851; reissued Feb. 15, 1853.	
9969	Gore, Thomas S	Stoves	Aug. 30, 1853	V.
10043	Gorman, George	Cotton-stalk cutters and pulverizers	Sept. 20, 1853	I.
9550	Gould, Benjamin, assignee of Joseph W. Webb	Valves of rotary steam-engines	Jan. 18, 1853	VI.
10084	Graham, Edmund H	Guns, magazine	Oct. 4, 1853	XIX.
10069	Graham, Robert A	Ploughs	Oct. 4, 1853	I.
	Gran, Carl Ludwig. (See Poppenhusen, Conrad.)			
10284	Graves, Israel, and Charles A. Bogert	Shingle-machine	Nov. 29, 1853	XIV.
	Gray, Wm. P. (See Cox, A. and J.)			
9917	Green, Benjamin H	Clamps, carpenters'	Aug. 9, 1853	XIV.
10220	Green, S., and C. Arnett, assignees of Samuel Green	Bolts, window shutter	Nov. 8, 1853	II.
10206	Greene, Jerome B	Looms, temples for	Nov. 8, 1853	III.
10205	Greenhalgh, James, jr	Looms, power	Nov. 8, 1853	III.
10011	Greenleaf, Wm. P	Scythes, shape of	Sept. 13, 1853	I.
10349	Greenough, B. F	Alcohol, separating, from water and other heavier fluids	Dec. 20, 1853	IV.
9791	Greenough, J. J	Glass, plate, manufacture of	June 14, 1853	XV.
591	Greer, James, and Co., assignees of John W. Van Cleve	Stove, cooking	Aug. 16, 1853	Design.
570	Griffin, James K., assignee of John Saby, jr	Stove, cooking	June 21, 1853	Design.
10085	Griffith, Levi B	Plough-beams	Oct. 4, 1853	I.
9547	Griffiths, John	Screw-cutting dies	Jan. 18, 1853	II.
10131	Griffiths, R., assignee of R. Griffiths and George Shield	Chairs, railroad, machines for making	Oct. 18, 1853	IX.
	Grimes, Wm. C. (See Bennett, Radley, and Hunter.)			
10132	Griswold, George W	Cloth-cutting, implements for	Oct. 18, 1853	XXI.
10272	Gritzner, M. C	Gold-separator	Nov. 29, 1853	II.
9841	Groom, Smith	Hose-coupling	July 12, 1853	XI.
10245	Grover, Hosea H	Churns, rotary	Nov. 15, 1853	I.

Alphabetical List.—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
9660	Gustine, R. F	Match-splint machines	April 12, 1853	XIV.
9625	Hackley, M. A	Presses, cheese	Mar. 22, 1853	XII.
	Hall, Samuel. (See J. C. Bidwell and John Hall.)			
10267	Hall, William K	Harvesters, grass	Nov. 22, 1853	I.
9589	Hallam, Edward R., assignee of Edward R. Hallam and Thomas B. Barnard.	Gas-meters	Feb. 8, 1853	IV.
10044	Halvorson, Halvor	Looms for weaving hair-cloth	Sept. 27, 1853	III.
10294	Hanson, Ebenezer W	Pen-holders	Dec. 6, 1853	XVIII.
10070	Hargreaves, Thomas C	Husking, maize, machines	Oct. 4, 1853	I.
9599	Harig, Augustus C	Keys, swivel-nibbed, for door-locks	Mar. 1, 1853	II.
10108	Harris, Joseph, jr.	Saws, driving circular	Oct. 11, 1853	XIV.
	Harris, N. C., W. Wheeler, W. P. and E. N. Merriam. (See Merriam, W. P.)			
10107	Harrison, Nathan, and John W. H. Metcalf	Ploughs, hill-side	Oct. 11, 1853	I.
10309	Hart, Carmi	Wheels, car	Dec. 13, 1853	X.
9746	Hartin, John	Meters, water	May 24, 1853	XI.
9918	Hartin, John	Paper, method of drying	Aug. 9, 1853	III.
607	Hartshorn, Ames & Co., assignees of W. Ames	Stove, parlor	Nov. 1, 1853	Design.
612	Hartshorn, Ames & Co., assignees of W. Ames	Cooking-stove	Dec. 20, 1853	Design.
9673	Hartupee, James T., and A. Alexander	Iron, bar, machines for rolling	April 19, 1853	II.
9661	Hatcher, Jacob J	Coin-safe and detector	April 12, 1853	XXII.
10338	Hatfield, W. J	Table-tops, machines for jointing	Dec. 20, 1853	XVII.
9727	Hawes, John H. H	Clocks, calendar	May 17, 1853	XIII.
9812	Hawes, R. L	Envelope folding-machines	June 21, 1853	XVIII.
9662	Hawes, Samuel W	Oil, rosin, manufacturing	April 12, 1853	IV.
9752	Hawes, Samuel W., assignee of Madison Page	Oil, rosin, processes of distilling	May 24, 1853	IV.
9789	Hay, A. K., and James M. Brookfield, assignees of Faatz and White; James M. Brookfield and Ephraim V. White being the original applicants. Faatz is declared by Judge Morsell to be joint inventor with White. The patent was accordingly issued to Hay and Brookfield.	Glass, manufacturing	June 14, 1853	XV.
9534	Hayden, P. P. R	Buckles	Jan. 11, 1853	XVI.
10097	Hayes, John P	Ranges, cooking	Oct. 4, 1853	V.
	Haynes, Hezekiah	Rakes	June 18, 1839; extended June 17, 1853.	
232	Hays, Adam	Splints for fractures	Aug. 13, 1850; reissued Mar. 8, 1853.	
9829	Hazlewood, George H	Cradle and tête-à-tête	July 5, 1853	XVII.
	Hearing, Robert, and C. Goodyear. (See Goodyear, Chas.)			
9535	Hedges, Silas A	Manure-spreaders	Jan. 11, 1853	I.
10289	Heilmann, Joshua, administrator of Joshua Heilmann	Fibrous materials, combing	Nov. 29, 1853; in France, Dec. 17, 1845.	III.
9728	Heim, Matthäus	Stoves, cooking	May 17, 1853	V.

10290	Hepworth, John J., assignee of Wm. Baird	Looms, power	Nov. 29, 1853	III.
	Herriot, Julius. (See Wells, G. G.)			
	Hesse, Frederick. (See Oerter, H. J.)			
9763	Hewitt, Henry W	Propellers	June 7, 1853	VII.
9919	Hickok, Samuel	Car-seats, railroad	Aug. 9, 1853	X.
9811	Hidden, Enoch	Ships, side-lights for	June 21, 1853	VII.
10109	Hill, Daniel	Harrow to a land-roller, attachment of a	Oct. 11, 1853	I.
556	Hill Jeremiah	Combs for ladies' hair	April 26, 1853	Design.
	Hine and Snow. (See Snow, Samuel.)			
10133	Hinkley, Thomas	Plotting, instruments for	Oct. 18, 1853	VIII.
9887	Hinman, Daniel B	Dyeing yarn parti-colored	July 26, 1853	IV.
9695	Hinsdale, Richard L	Elastic exercising-machines	May 3, 1853	XX.
	Hinty, Thomas. (See Baynes, G. W., Hinty, and Jackson.)			
10045	Hochstrasser, Henry	Sash-fastener	Sept. 27, 1853	II.
229	Hodge, Nehemiah	Vessels, apparatus for discharging water from the holds of	Oct. 19, 1852; reissued Feb. 1, 1853.	
231	Hodge, Nehemiah	Brakes for railroad cars, mode of operating	Oct. 2, 1849; reissued Mar. 1, 1853.	
9546	Hogeland, James S	Condensers, wool	Jan. 18, 1853	III.
580	Holden, Isaac H., agent of the High-street Furnace Company, assignee of John Mason.	Stove, cooking	July 19, 1853	Design.
9520	Hollings, Richard	Hose-pipes	Jan. 4, 1853	XI.
10268	Holt, S. R	Presses, self-acting	Nov. 22, 1853	XII.
	Holtzer, J. (See Abbott, J. G., and A. Lawrence.)			
	Holtzer, Julius. (See North, Chase, and North.)			
	Holtzer, J. (See North, Chase, and North.)			
9970	Hopkins, Lansing E	Hat-bodies, conductors in machines for forming	Aug. 30, 1853	III.
	Hopkinson, Joseph. (See Crabtree, John, and Joseph Hopkinson.)			
9955	Horn, Peter	Planters, seed	Aug. 23, 1853	I.
9646	Horney, Solomon, jr	Ploughs	April 5, 1853	I.
9775	Hornig, Julius, and Ludwig Suess	Stone, artificial	June 7, 1853	IV.
10071	Horsfall, Wm	Annunciators for hotels	Oct. 4, 1853	XXII.
10311	Hotchkiss, F. S., and C. W. Blakeslee	Clothes-lines, spring clamps for	Dec. 13, 1853	XVII.
9817	Hovey, Daniel H	Waxed ends, machine for twisting	June 28, 1853	XXII.
10231	Hovey, Daniel H	Leather, machine for creasing straps of	Nov. 15, 1853	XVI.
9542	Howard, Cyrus G., assignee of D. H. Chamberlain	Metal-bars, machinery for reducing	Jan. 18, 1853	II.
9737	Howard, Rufus L., assignee of Wm. F. Ketchum	Harvesters, track-clearers to	May 17, 1853	I.
9797	Howe, Frederick W	Planing metal, machine for	June 21, 1853	XIV.
	Hubbell, J. B. & H. C., and Lauren Ward, administrator of Richard Ward. (See Ward, Lauren, administrator of Richard Ward.)			
9764	Hubbell, W. S., and A. Barrett	Compositions for treating wool	June 7, 1853	IV.
10031	Hulbert, Samuel	Ploughs	Sept. 20, 1853; in Canada, Sept. 20, 1852.	I.
10291	Hume, Nelson A., assignee of Frederick Nicholson	Screw-jacks for raising buildings	Nov. 29, 1853	XII.
	Hunt, Bela T., and Roswell Enos. (See Enos, Roswell.)			
9376	Hunt, F. B	Mills for grinding apples and other substances	July 26, 1853	XIII.
9989	Hunt, Henry	Canisters, preserve, sealing	Sept. 6, 1853	XVII.
10354	Hunt, N., assignee of Henry Edwards. (See Blodget, S. C.)	Sewing-machines	Dec. 20, 1853	III.
	Hunt, Walter. (See Kipp, Chas. T.)			
	Hunter, et al. (See Wm. C. Grimes.)			
10355	Huntington, W. T., assignee of Wm. H. Akins	Time registers for showing the day of the week and month	Dec. 20, 1853	VIII.

Alphabetical List.—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
	Huntley, Hosea H. (See Goodhue, Daniel F.)			
	Huntley, Hosea H. (See Goodhue, Daniel F.)			
	Huntley, Hosea H. (See Goodhue, Daniel F.)			
9565	Hutchinson, Charles B	Barrel-heads, machinery for cutting	Feb. 1, 1853	XIV.
10094	Hutchinson, Charles B	Staves, machine for jointing	Oct. 4, 1853	XIV.
	Hutchinson, Enoch	Ships' galley, for the distillation of salt water	May 20, 1839; extended May 19, 1853.	
10154	Hutchinson, Samuel	Potatoes, cutting and planting	Oct. 25, 1853	I.
9779	Huyett, Wm. G	Harvesters of grain and grass	June 14, 1853	I.
9798	Hyde, Wm. S	Cultivator-ploughs	June 21, 1853	I.
9663	Ingersoll, Simon	Shingle-machines	April 12, 1853	XIV.
9799	Ingersoll, Simon	Plug-cutting machines, feed-motion in	June 21, 1853	XIV.
9920	Ingraham, Lewis S	Winnowers	Aug. 9, 1853	I.
9971	Irving, Benjamin	Boilers, steam	Aug. 30, 1853; in France, May 12, 1853; in Belgium, May 17, 1853.	VI.
10000	Irving, Benjamin	Paddle-wheel	Sept. 6, 1853	VII.
560	Jackson, James L	Grate-frame	May 3, 1853	Design.
561	Jackson, James L	Grate-frame	May 3, 1853	Design.
562	Jackson, James L	Grate-frame	May 3, 1853	Design.
563	Jackson, James L	Grate-frame and summer-piece	May 3, 1853	Design.
9858	Jackson, John	Spinning-jacks	July 19, 1853	III.
	Jackson, Minter. (See Baynes, G. W., Minter, and Jackson.)			
9877	James, David A	Glue, processes for making	July 26, 1853	IV.
9771	Jarosson, Leon	Painting on cloth	June 7, 1853	IV.
9521	Jenkins, Benj. F., and Luke L. Knight	Lathes for turning irregular forms	Jan. 4, 1853	XIV.
10032	Jenkins, Samuel	Planters, seed	Sept. 20, 1853	I.
9921	Jenkins, John W	Fences, iron posts for	Aug. 9, 1853	IX.
	Jennison, Wm. H. (See Parker, James M.)			
540	Jewett, S. S., and F. H. Root	Stove, cooking	Jan. 25, 1853	Design.
541	Jewett, S. S., and F. H. Root	Stove, wood	Jan. 25, 1853	Design.
542	Jewett, S. S., and F. H. Root	Stove, cooking	Jan. 25, 1853	Design.
9780	Jewett, S. S., and F. H. Root	Stoves	June 14, 1853; antedated Dec. 14, 1852.	V.
10312	Jinks, Melvin	Turnkeys	Dec. 13, 1853	XX.
570	Johnson, Cox, and Fuller, assignees of Sam. Pierce and J. J. Dulley	Stove, cook	July 12, 1853	Design.
581	Johnson, Cox, and Fuller, assignees of J. J. Dulley	Stove, cooking	July 19, 1853	Design.
	Johnson, Wm. H. (See Bates, Wm. G.)			
9665	Johnson, Wm. H	Sewing-machines, feeding-clamps for	April 12, 1853	III.
10207	Jones, John, and Alex. Lyle	Straw-cutters, cutting-gear of	Nov. 8, 1853	I.
10110	Jones, Thomas B	Cob and stalk cutters	Oct. 11, 1853	I.
	Jordan, John, et al. (See Parker, James M.)			
10254	Kain, James R	Bedstead-rails, cutting screws on, apparatus for	Nov. 22, 1853	XVII.

10203	Karns, Samuel	Hulling-cylinders, clover, fastening the teeth to	Nov. 8, 1853	I.
9754	Keck, Philip H	Cultivators	May 31, 1853	I.
10111	Keller, Henry M	Winnowers of grain	Oct. 11, 1853	I.
10166	Kellogg, Chas. H., assignee of Wm. Wheeler	Curry-combs, cutting the bars and teeth of	Oct. 25, 1853	II.
10186	Kelsey, Christopher P	Grain-cradles	Nov. 1, 1853	I.
10252	Kelly, Oliver A	Looms	Nov. 22, 1853	III.
9696	Kendall, George	Candle-mould apparatus	May 3, 1853; in England, Nov. 12, 1852.	IV.
9702	Kent, Joseph, assignee of Samuel R. Wilmot	Water from wells, apparatus for drawing	May 3, 1853	XI.
10072	Ketcham, Richard	Straw-cutters	Oct. 4, 1853	I.
228	Ketcham, Wm. F	Reaping-machines	July 10, 1847; reissued Oct. 21, 1851; reissued Jan. 11, 1853.	
238	Ketcham, Wm. F	Reaping-machines	July 10, 1847; reissued April 26, 1853.	
	Ketcham, Wm. F. (See Howard, Rufus L.)			
244	Kidder, Walter	Gas-regulators	Oct. 12, 1852; reissued June 28, 1853.	
	Kidder, Walter, and B. F. Stevens. (See Stevens, B. F.)			
9593	Kimball, Alpheus	Scythe-fastenings	Feb. 22, 1853	I.
9548	Kingsley, John L	Stereotype plates, compounds for	Jan. 18, 1853	XVIII.
9790	Kingsley, John L	Stereotype plates, moulding gutta percha	June 14, 1853	XVIII.
9527	Kipp, Charles T., assignee of Walter Hunt	Bottle-stoppers	Jan. 4, 1853	XXII.
9765	Kittle, Samuel P	Door-fastener	June 7, 1853	II.
	Knight, Luke L., and Benj. F. Jenkins. (See Jenkins and Knight.)			
10209	Knowles, Jonathan	Looms	Nov. 8, 1853	III.
9972	Kranser, John	Mills, cider	Aug. 30, 1853	XIII.
	Kreter, Rudolph. (See Nunns, R., and Clark, John.)			
9594	Lacon, Wm. Sterling	Boats, ships', suspending, lowering, and liberating	Feb. 22, 1853; in England, Feb. 23, 1852.	VII.
	Laird, Joshua. (See Clinton, Thomas G.)			
	Lamb, Joseph. (See Bradley, A.)			
9880	Lancaster, Charles W	Cannon, and other fire-arms, manufacture of	July 5, 1853; in England, Jan. 16, 1851.	XIX.
610	Lane, John	Sewing butterfly	Nov. 8, 1853	Design.
10197	Lapham, Seneca	Cultivators, devices for steering	Nov. 1, 1853	I.
10210	Lash, Abraham, and Miles Moore	Winnowers, screens of	Nov. 8, 1853	I.
250	Latourette, David L	Oil-presses	Oct. 28, 1851; reissued Nov. 22, 1853.	
10119	Latta, Alexander B	Engines, oscillating	Oct. 11, 1853	VI.
	Lawrence and Abbott. (See Sailor, Samuel H.)			
	Lawrence and Abbott. (See Holtzer, J.)			
	Lawrence and Abbott. (See Sailor, S. H.)			
	Lawrence and Abbott. (See Smith and Brown.)			
	Lawrence, John, assignee of Alfred T. Serrell	Mouldings, wood, machines for making	May 16, 1848; disclaimer Mar. 29, 1853.	
	Lazelle, W. H. (See Fenwick, S. E., and H. F. Wilson.)			
9973	Leavitt, O. S	Hemp and flax breaking machines	Aug. 30, 1853	III.
10033	Leavitt, O. S	Hemp-brake	Sept. 20, 1853	III.
10034	Leavitt, O. S	Hemp and flax, drawing-frames for	Sept. 20, 1853	III.
10232	Leeds, Joseph	Ventilators	Nov. 15, 1853	V.
	Leibrandt, Fred., and C. W. Warnick. (See Warnick and Leibrandt.)			

Alphabetical List.—Continued.

No.	Name of Patentee.	Invention or discovery.	Date.	Class.
	Leibrandt, Fred., and C. W. Warnick. (See Warnick and Leibrandt.)			
	Leibrandt, Fred., and C. W. Warnick. (See Warnick and Leibrandt.)			
	Leibrandt, Fred., and C. W. Warnick. (See Warnick and Leibrandt.)			
9922	Leonard, George	Fire-arms	Aug. 9, 1853	XIX.
10198	Leonard, Wm. B	Meters, fluid	Nov. 1, 1853	XI.
9581	Le Riemondie, H	Ear, &c., surgical instruments for examining the eye	Feb. 8, 1853; antedated Oct. 23, 1852.	XX.
9586	Leslie, Richard M	Books, paging	Feb. 15, 1853	XVIII.
9923	Lewis, John	Printing-presses	Aug. 9, 1853	XVIII.
10233	Lewis, William and William H	Daguerreotype plates, coating-box for	Nov. 15, 1853	XVIII.
10255	Lewis, Wm. and Wm. H	Cards, business, boxes for supplying	Nov. 22, 1853	XXII.
9990	Lindner, Joseph R	Collars, horse	Sept. 6, 1853	XVI.
9647	Lindsay, Wm. H	Water-meters	April 5, 1853	XI.
10086	Littlefield, Archibald S	Switches, self-acting	Oct. 4, 1853	IX.
	Locks and Canals, proprietors of, on Merrimack River, assignees of S. L. Dana. (See Dana, Samuel L.)			
	Long, Stephen H	Bridges, wooden-framed suspension	Nov. 7, 1839; extended Nov. 5, 1853.	
9729	Longley, Abner H	Machine for cutting wooden screws	May 17, 1853	II.
	Lucas and Shepardson. (See Shepardson and Lucas.)			
9825	Lucas, Napoleon B	Threshers and separators of grain	June 28, 1853	I.
9961	Lucas, Wm. F., administrator of L. A. B. Walback	Cannon-boring	Aug. 23, 1853	XIX.
9747	Lupton, Lewis	Harrows, the construction of.	May 24, 1853	I.
	Lyle and Jones. (See Jones and Lyle.)			
10134	Lynahon, Daniel	Boots, cutting	Oct. 18, 1853	XVI.
9759	Lynde, John D., assignee of Arnold Buffum	Gold-washer and amalgamator	May 31, 1853	II.
10234	Lyon, Sergius P	Stoves, air-tight, self-acting dampers for	Nov. 15, 1853	V.
10035	Lyon, Warren	Drills, metal	Sept. 20, 1853	II.
10155	Mackey, D. S., and J. R. Smith	Winnowers	Oct. 25, 1853	I.
	MacKennon, et al. (See Mee, John.)			
	MacKennon, et al. (See Mee, John.)			
	Magoun, Snow. (See Moore and Crosby.)			
549	Manigle, E. M., and George Phipps	Water-cooler	April 19, 1853	Design.
9536	Mann, William	Paper, copying, manufacturing	Jan. 11, 1853; antedated July 11, 1852.	III.
10012	Mann, Zadoc H	Valves, safety, for steam-boilers	Sept. 13, 1853	VI.
10073	Mann, Zadoc H	Wheels, car	Oct. 4, 1853	X.
9675	Manny, John H	Harvesters, cutter-fingers of	April 19, 1853; in England, Dec. 9, 1852.	I.
9800	Manny, John H	Harvesters, cutters to	June 21, 1853; in England, Dec. 9, 1852.	I.
9626	Mansfield, William	Knitting-machines	Mar. 22, 1853	III.

235	Markham, Leonard F.	Books, machines for trimming the edges of	April 18, 1848; reissued April 19, 1853.	
9692	Marsh, David, and B. Whitney	Hullers, rice	April 26, 1853	I.
9621	Marshall, Moses, W. Aldrick, and L. B. Tyng, assignees of Moses Marshall.	Knitting-machines	Mar. 15, 1853	III.
10087	Maring, Leonard S.	Boring wheel hubs, cutter for	Oct. 4, 1853	XIV.
	Martin, Wm. A. (See Watson, Wm., and Peter Van Zandt.)			
9611	Mascher, J. F.	Daguerreotype cases	Mar. 8, 1853	XVIII.
	Mason, John. (See High-street Furnace Company.)			
10046	Mason, Nicholas	Ranges, cooking	Sept. 27, 1853	V.
10135	Mason, William	Looms, power	Oct. 18, 1853	XIX.
9929	Massachusetts Arms Company, assignees of Joshua Stevens	Fire-arms, repeating	Aug. 9, 1853	XVII.
9730	Mathesius, Frederick	Furniture, upholstering	May 17, 1853	
248	Matthew, David	Spark and gas consumers	Feb. 20, 1849; reissued Oct. 4, 1853.	VI.
10295	Matthew, David	Spark-burner and water-heater for locomotives	Dec. 6, 1853	XV.
10156	Matthews, E. G.	Stone-dressing, machines for	Oct. 25, 1853.	III.
	Mauritz and Demeure. (See Demeure and Mauritz.)			
9637	Maxwell, John	Knitting-machines	Mar. 29, 1853; antedated Sept. 29, 1852.	II.
9587	Mayer, Andrew	Screw-cutting dies, arrangement of	Jan. 11, 1853	
	Maynard, R. F., and Robert Sinclair, jr. (See Sinclair and Maynard.)			
9638	McAdams, John	Books, bound, paging	Mar. 29, 1853	XVIII.
10047	McCarty, Henry	Iron, sheet, manufacture of	Sept. 27, 1853	II.
239	McCormick, Cyrus H.	Reaping-machines	Oct. 23, 1847; reissued May 24, 1853.	II.
9753	McDougall, Duncan E.	Door-fastener	May 31, 1853	XII.
10256	McDougall, S. T.	Scales, platform	Nov. 22, 1853	VI.
9600	McKay, James	Engines, rotary steam	Mar. 1, 1853	XIV.
9939	McKinley, Arshal H.	Augur-handles and braces, socket for	Aug. 16, 1853	V.
9674	McPherson, Alexander	Ranges, cooking	April 19, 1853	III.
9718	Mee, John, John Rourke, and Gilbert MacKennon, assignees of John Mee.	Knitting-looms	May 10, 1853	III.
9719	Mee, John, John Rourke, and Gilbert MacKennon, assignees of John Mee.	Warp-net fabrics	May 10, 1853	IV.
9994	Meredith, Stephen	Gas-generators, feed-apparatus to	Sept. 6, 1853	IX.
10211	Merewether, Wm. H.	Fence, wire	Nov. 8, 1853	V.
9685	Merriam, W. P., N. C. Harris, Wm. Wheeler, and E. N. Merriam	Candlesticks, iron, construction of	April 26, 1853	
	Merrill, et al. (See Woodbury, Merrill, and Patten.)			
	Merrill, et al. (See Woodbury, Merrill, and Patten.)			
10313	Merrill, W. E., and F. Tupper	Bedstead-fastenings	Dec. 13, 1853	XVII.
582	Merriman, Julius E.	Sewing-bird	July 26, 1853	Design.
10199	Merritt, Wm. T.	Gates, mode of opening and closing	Nov. 1, 1853	IX.
	Metcalf and Harrison. (See Harrison, Nathan.)			
10339	Meyer, L. O. P.	Caoutchouc compound, process of vulcanizing	Dec. 20, 1853	IV.
9721	Middleton, John W., assignee of James Young	Printing-presses	May 10, 1853; antedated Nov. 10, 1852.	XVIII.
9755	Middleton, Richard H.	Rails, compound	May 31, 1853	IX.
10273	Miller, Benj. F.	Fence, iron	Nov. 29, 1853	IX.
9899	Miller, Joseph R.	Tunnels, submarine	Aug. 2, 1853	IX.
9676	Miller, Samuel	Planters, cotton-seed	April 19, 1853	I.

Alphabetical List.—Continued.

No.	Name of Patentee	Invention or discovery.	Date.	Class.
9748	Millet, Stanislas	Meat-cutters	May 24, 1853	XVII.
	Millington, Charles, et al. (See Parker, James M.)			
10136	Millington, Norman, and Dennis J. George	Squares, carpenters' machines for figuring	Oct. 18, 1853	XIV.
9924	Millis, Eben. L.	Corn-shellers	Aug. 9, 1853	I.
	Mini, John G. (See Child, R. S.)			
9708	Minnis, Thomas S.	Chairs, invalid locomotive	May 10, 1853	XX.
10340	Mitchell, James A.	Looms, hand	Dec. 20, 1853	III.
9831	Mitchell, Sir Thomas L.	Propelling vessels	July 5, 1853; in England, Nov. 25, 1848.	VII.
9974	Mitchell, Wm. H.	Type, distributing and composing machine for	Aug. 30, 1853	XVIII.
9572	Moinier, Jean B., and Pierre H. Boutigny	Fatty materials, purifying	Feb. 8, 1853; in France, Nov. 14, 1849.	IV.
9952	Moinier, Jean B., and Pierre H. Boutigny	Steam, method of generating	Aug. 23, 1853; in France, Jan. 18, 1852.	VI.
9992	Montague, Charles	Printing-presses	Sept. 6, 1853	XVIII.
9993	Montague, Charles	Printing-presses	Sept. 6, 1853	XVIII.
10324	Montgomery, Joseph and James	Winnowers, shoes to	Dec. 20, 1853	I.
9538	Montgomery, Richard	Boilers, steam, method of connecting the sheets of shut-flue and water-space.	Jan. 11, 1853	VI.
9738	Montgomery, Elizabeth, assignee of Richard Montgomery	Boilers, steam, &c., corrugated plates for	May 17, 1853; in England, Feb. 17, 1853.	VI.
9842	Montgomery, Elizabeth, assignee of Richard Montgomery	Beams, sheet-metal	July 12, 1853; in England, Oct. 13, 1852.	II.
9964	Moore and Crosby, assignees of Snow Magoun	Printers' rules, machines for cutting and bevelling	Aug. 23, 1853	XVIII.
	Moore, Miles, and Abraham Lash. (See Lash and Moore.)			
611	Moore, Simon F.	Stoves, cooking	Nov. 29, 1853	Design.
9595	Moreland, James	Mortising-machines	Feb. 22, 1853	XIV.
9818	Morewood, E., and G. Rodgers	Zinc, coating, with lead	June 28, 1853; in England, Dec. 12, 1850.	II.
10187	Morewood, Edmund, and George Rodgers	Metal, coating sheets of	Nov. 1, 1853	II.
	Morey, C. (See Blodgett, S. C.)			
9709	Morrill, Jonathan W.	Ditching-machine	May 10, 1853	IX.
10263	Morrison, Enoch R.	Shingle-machine	Nov. 22, 1853	XIV.
10188	Morse, Russell S.	Springs, adjustable, for carriages	Nov. 1, 1853	X.
10004	Morse, Stephen	Brakes, iron car	Sept. 6, 1853	X.
10048	Mott, Jordan L.	Stoves, cooking	Sept. 27, 1853	V.
10049	Mott, Jordan L.	Bathing-tubs	Sept. 27, 1853	XX.
9991	Moyle, John	Straw-cutters	Sept. 6, 1853	I.
9940	Mumma, Jacob	Planters, seed, draught apparatus of	Aug. 16, 1853	I.
9859	Munson, Edmund	Mill-stones, eyes for	July 19, 1853	XIII.
9782	Muntz, George Fred., jr.	Tubes, metal, manufacture of	June 14, 1853; in England, May 8, 1852.	II.
10285	Muntz William H.	Paddle-wheels	Nov. 15, 1853	VII.

9781	Murch, Harvey	Mop-heads	June 14, 1853	XVII.
9757	Murphy, Thomas P	Locks, bank	May 31, 1853	II.
10096	Murrill, James H	Looms for weaving coach-lace	Oct. 4, 1853	III.
9756	Neer, Charles	Fire-places and stoves	May 31, 1853	V.
9749	Nelson, Thomas	Watches and chronometers	May 24, 1853	VIII.
10325	Nelson, Thomas F	Manure crushers and sowers	Dec. 20, 1853	I.
10314	Neson, Joseph E	Harvesters and binders	Dec. 13, 1853; in England, Aug. 27, 1853.	I.
9648	Newbury, Thompson	Screw-machines, apparatus for feeding blanks to	April 5, 1853	II.
9677	Newbury, Thompson	Screw-blanks, machines for threading	April 19, 1853	II.
9801	Newcomb, D. H. B	Ploughs, hill-side	June 21, 1853	I.
10099	Newell, John	Lamps, camphene	Oct. 4, 1853	V.
9669	New England Screw Company, assignees of Cullen Whipple	Screw-blanks, machinery for shaving the heads of	April 12, 1853; antedated Nov. 30, 1852.	II.
590	Nichols, G. W., assignee of Thomas Ball	Statue of Daniel Webster	Aug. 9, 1853	Design.
10086	Nichols, James R	Cans, oil or fluid	Sept. 20, 1853	V.
	Nicholson, Frederick. (See Hume, Nelson A.)			
9975	Nishwitz, Frederick	Harvesters, grain	Aug. 30, 1853	I.
10310	Nock, Joseph	Inkstand-covers, hinge for	Dec. 13, 1853	XVIII.
9649	Noll, Henry R	Sash-fasteners, arrangement of	April 5, 1853	II.
10077	Norcross, Josiah, assignee of Edward Brown	Burglar alarms	Oct. 4, 1853	XXII.
9629	Norfolk, E. S., assignee of S. D. Tripp	Boots and shoes, machines for pegging	April 12, 1853	XVI.
	Norris and Fisher. (See Fisher, M., and John H. Norris.)			
	Norris, Henry Lee. (See Armstrong, S. T.)			
9948	North, Gibson	Stoves, cooking, and ranges, oven-doors for	Aug. 16, 1853	V.
9832	North, John	Trusses	July 5, 1853	XX.
557	North, Chase, and North, assignees of G. Smith and H. Brown	Range, portable	April 26, 1853	Design.
586	North, Chase, and North, assignees of Thomas Barry	Stove, cooking	July 26, 1853	Design.
587	North, Chase, and North, assignees of Reuben H. N. Bates	Range, cooking	July 26, 1853	Design.
588	North, Chase, and North, assignees of Julius Holzer	Stove, cooking	Aug. 2, 1853	Design.
596	North, Chase, and North, assignees of S. W. Gibbs	Stove	Sept. 6, 1853	Design.
599	North, Chase, and North, assignees of Julius Holzer	Stove, cooking	Oct. 4, 1853	Design.
601	North, Chase, and North, assignees of G. Smith and H. Brown	Stoves	Oct. 4, 1853	Design.
600	North, Chase, and North, assignees of G. H. Tryday	Stoves	Oct. 4, 1853	Design.
9809	Norton, Benjamin R	Pens, metallic-pointed	June 21, 1853	XVIII.
10019	Norton, Frederick Wm	Fabrics, plain and figured, manufacture of	Sept. 13, 1853	III.
9925	Northrup, Joel G	Printing-presses	Aug. 9, 1853	XVIII.
10170	Noyes, Daniel	Hammers, machine	Oct. 25, 1853	II.
9526	Nunns, Robert, and John Clark, assignees of Rudolph Kreter	Piano-forte hammers, covering	Jan. 4, 1853	XVIII.
104	Nutting, Rufus, 2d	Pianos, organ	Feb. 8, 1848; additional improvement added Feb. 8, 1853.	
9872	Oerter, H. J., assignee of Frederick Hesse	Paper-cutting machine	July 19, 1853	XVIII.
9612	Orcutt, Lysander A	Moulding in flasks, machines for	Mar. 8, 1853	II.
9703	O'Reilly, Patrick	Rails for railroads	May 3, 1853; antedated Nov. 3, 1852.	IX.
9710	Osgood, Enoch	Leather beltings, fastening	May 10, 1853	XVI.
	Otis, Elizabeth, administratrix of Wm. S. Otis	Excavator, crane, for excavating and removing earth	Feb. 24, 1839; extended Feb. 23, 1853.	
10357	Owen, J. Parsons	Bedstead-rails, &c., cutting screws on, machine for	Nov. 22, 1853	XVII.
10315	Page, Charles	Bedsteads, sectional	Dec. 13 1853	XVII.

Alphabetical List.—Continued.

No.	Name of patentee.	Invention or discovery.	Date.	Class.
	Page, Madison. (See Hawes, Samuel W.)			
9556	Palmer, Freeman	Sewing-machines, feed-motion in	Jan. 25, 1853	III.
	Palmer, L. O., and M. Peckham. (See Peckham and Palmer.)			
593	Palmer, P. A.	Milk-stool frame	Aug. 30, 1853	Design.
9687	Palmer, Stephen F.	Towing apparatus for canal-boats	April 26, 1853	VII.
9566	Parker, Elijah F.	Lanterns, frames for	Feb. 1, 1853	V.
10341	Parker, Ephraim	Planing clapboards, machine for sawing and	Dec. 20, 1853	XIV.
9956	Parker, Frederick B.	Rakes, hay	Aug. 23, 1853	I.
10112	Parker, J. J.	Straw-cutters	Oct. 11, 1853	I.
9760	Parker, James M., assignee of John Jordan and Eliza Millington, executrix, and Wm. S. Toole, executor, of Charles Millington; Jordan and Millington being the assignees of Wm. H. Jennison.	Compositions for a filter	May 31, 1853	IV.
	Parry, George T. (See Rice, John.)			
10061	Parrish, Stephen E.	Clamps for laying floors	Sept. 27, 1853	XIV.
	Patten, et al. (See Woodbury, Merrill, and Patten.)			
	Patten, et al. (See Woodbury, Merrill, and Patten.)			
	Patton, James M., and Wm. F. Fergus. (See John C. Da Costa.)			
9926	Patterson, James	Friction-rollers	Aug. 9, 1853	IX.
10296	Payson, Ira F.	Soap ingredients	Dec. 6, 1853	IV.
9577	Peacock, George	Casting-pipes, core-bars for forming cores of	Feb. 8, 1853	II.
9539	Pease, Dan., jr.	Smut-machines	Jan. 11, 1853	XIII.
9731	Pease, Julius A.	Hoes, seeding	May 17, 1853	I.
9522	Peckham, M., and L. O. Palmer	Ore-washer	Jan. 4, 1853	II.
10274	Peer, John W.	Hammer, trip	Nov. 29, 1853	II.
10137	Pender, John	Looms, power	Oct. 18, 1853	III.
10189	Perkins, Howard	Brace and bit-fastener, carpenters'	Nov. 1, 1853	XVI.
9557	Perkins, Samuel M.	Wearing apparel, &c., seamless-felt, manufacture of	Jan. 25, 1853	XXI.
10157	Perley, Charles	Ships' side-lights	Oct. 25, 1853	VII.
10037	Perrin, Henry, and Wm. Ruddock	Planters, seed	Sept. 20, 1853	I.
9578	Peters, Charles	Steel to cast-iron, moulds for uniting	Feb. 8, 1853	II.
10212	Peterson, Abram B.	Threshers and separators, grain	Nov. 8, 1853	I.
10285	Phelps, Charles	Table-leaves, falling, supporting	Nov. 29, 1853	XVII.
10236	Phillips, George	Planting cultivators, seed	Nov. 15, 1853	I.
9843	Phineas, Myer	Pens, metallic	July 12, 1853	XVIII.
	Phipps, George, and E. M. Manigle. (See Manigle, E. M.)			
9862	Pierce, Hiram, and George E. Cady, assignees of Bradford Rowe	Leather, gripes for holding	July 19, 1853	XVI.
	Pierce, Samuel, and J. J. Dulley. (See Johnson, Cox, and Fuller.)			
10258	Pierpont, William	Harvesters, grain and grass, cutters of	Nov. 22, 1853	I.
9559	Piffaut, J.	Piano-fortes, frames of	Jan. 25, 1853	XVIII.
	Pindell, Richard. (See Thurman, Wm. J.)			
9888	Pitman, Levi	Theodolite, plotting	July 26, 1853	VIII.
10059	Platt, Charles H.	Blocks, ships'	Sept. 27, 1853	VII.

	Plummer, Richard H., and Wm. H. Thompson. (See Thompson and Plummer.)			
10286	Pogue, John B. and Wm. F.	Pipes of hydraulic cement, forming	Nov. 29, 1853	IV.
240	Pond, Moses	Ranges, cooking	Feb. 25, 1851; reissued June 7, 1853.	
9802	Pope, Rev. Augustus R	Electro-magnetic alarms	June 21, 1853	VIII.
9693	Poppenhusen, Conrad, assignee of C. S. Gran	Cementing materials for ornamental compounds	April 26, 1853; in Germany, Dec. 18, 1847.	IV.
9833	Porter, Wm., and Edward A. Tuttle	Lanterns	July 5, 1853	V.
9561	Potter, Abiather F	Gold-washer and amalgamator	Jan. 25, 1853	II.
10013	Potts, George	Mandrel, revolving, for lining cylinder with metal	Sept. 13, 1853	II.
10088	Powers, Hiram	Files and rasps	Oct. 4, 1853	II.
9650	Pownall, Charles J	Fibre, vegetable, processes for preparing	April 5, 1853; in Ireland, Aug. 11, 1852.	III.
	Pratt, E. L. (See Sargeant, James, and D. P. Foster.)			
	Pratt, Joseph. (See Bowers, Pratt & Co.)			
9860	Pratt, Ralph C	Ditching, machines for	July 19, 1853	IX.
10171	Pratt, Samuel	Screw-nails	Oct. 25, 1853	II.
9680	Proprietors of Locks and Canals on Merrimack River, assignees of Samuel L. Dana.	Oil, rosin, purifying	April 19, 1853	IV.
9562	Prosser, Thomas	Drills, expanding	Jan. 25, 1853	II.
9571	Pulvermacher, Isaac L	Voltaic batteries and apparatus for medical and other purposes	Feb. 1, 1853; in Austria, Oct. 9, 1849.	VIII.
9784	Purden, Fergus	Mortising-machines	June 14, 1853	XIV.
9783	Pusey, Lea	Tables, dining, self-waiting	June 14, 1853	XVII.
10158	Quantin, Alphonsé	Bottles, valve-gauge for	Oct. 25, 1853	XXII.
	Radley, et al. (See Grimes, Wm. C.)			
9977	Ralston, Andrew	Saw-mills	Aug. 30, 1853	XIV.
10237	Randlett, Timothy	Mop-heads	Nov. 15, 1853	XVII.
10020	Rankin, James	Saws, mill, hanging	Sept. 13, 1853	XIV.
9889	Rapp, Jackson A., and E. S. Waight	Saws, straining by compressed air	July 26, 1853	XIV.
9567	Read, George B	Screw-wrench	Feb. 1, 1853	II.
	Read, Joseph R. (See Wm. W. and C. M. Atkins.)			
9878	Redmond, Owen	Lamps	July 26, 1853	V.
9901	Reeder, John M.	Boilers, steam, construction of	Aug. 2, 1853	VI.
	Rees and Carter. (See Carter and Rees.)			
9697	Reid, Daniel	Manure-carts	May 3, 1853	I.
9698	Reid, George W.	Corn-shellers	May 3, 1853	I.
9819	Reynolds, Levi S.	Bran-dusters	June 28, 1853	XIII.
10138	Rice, Benjamin F	Looms for weaving fancy goods	Oct. 18, 1853	III.
9912	Rice, John, assignee of George T. Parry	Friction, anti, boxes	Aug. 2, 1853	X.
9711	Richards, John W.	Printing-presses, registering apparatus for	May 10, 1853	XVIII.
10160	Richards, Wm. W.	Shovels, spades, &c., making	Oct. 25, 1853	II.
9903	Richardson, Ithiel S	Telegraph and railway, atmospheric	Aug. 2, 1853; in England, Dec. 7, 1852.	IX.
9902	Richardson, John, R. J. Westerman, and E. Wilder	Spikes, machines for making	Aug. 2, 1853	II.
605	Richardson, N. P.	Stove, cooking	Oct. 25, 1853	Design.
10060	Richardson, Wm.	Draining-machine, centrifugal	Sept. 27, 1853	XI.
	Richmond, et al. (See Wager, Richmond, and Smith.)			
	Richmond, et al. (See Wager, Richmond, and Smith.)			
9627	Riley, James, and Wm. Allen	Oil, rosin, processes for distilling	Mar. 22, 1853	IV.

Alphabetical List.—Continued.

No.	Name of Patentee.	Invention or discovery.	Date.	Class.
	Ripley, E., and N. S. Vedder. (See Eddy, G. W.)			
	Ritchie, Henry. (See Thompson, S. C., G. W. Westerfield, and H. Ritchie.)			
10190	Ritterband, Henry M.	Gold-washer	Nov. 1, 1853	II.
10014	Robeson, Andrew, jr	Cloth, bucking	Sept. 13, 1853; in England, Nov. 8, 1852.	III.
9957	Roberts, Milton	Turning, arrangement of cutters for	Aug. 23, 1853	XIV.
10117	Robertson, H. G	Washing-machines	Oct. 11, 1853	XVII.
10213	Robertson, Wm.	Violins, keyed, finger-board for	Nov. 8, 1853	XVIII.
566	Robinson, Edward F	Stove, cooking	May 10, 1853	Design.
9844	Robinson, H. G	Coin-safe and detector	July 12, 1853	XXII.
10056	Robinson, L. F., assignee of Caleb B. Burnap	Veneering, method of	Sept. 27, 1853	XIV.
	Rogers and Morewood. (See Morewood and Rogers.)			
	Rogers, George, and Edw. Morewood. (See Morewood and Rogers.)			
9803	Rohr, George	Planters, seed	June 21, 1853	I.
10259	Rood, Morgan L.	Fire-arms, revolving	Nov. 22, 1853	XIX.
	Root and Jewett. (See Jewett and Root.)			
	Root and Jewett. (See Jewett and Root.)			
	Root and Jewett. (See Jewett and Root.)			
9941	Root, E. K.	Hammers, drop	Aug. 16, 1853	II.
10275	Ropes, David N.	Knives, table, attaching handles to the blades of	Nov. 29, 1853	II.
10015	Ross, Hervy S.	Fences	Sept. 13, 1853	IX.
	Roth, J. Augustus	Furnaces for smelting iron ore, construction of	Oct. 31, 1839; extended Oct. 18, 1853.	
10095	Roth, J. Augustus	Fabrics, bleached, processes of dechlorinating	Oct. 4, 1853	III.
9758	Roucout, Marie Louise	Grate-bars	May 31, 1853; in France, Sept. 10, 1851.	V.
	Rourke, et al. (See Mee, John.)			
	Rourke, et al. (See Mee, John.)			
233	Rouse, Wanton	Mules, self-acting, for spinning	Nov. 2, 1852; reissued Mar. 15, 1853.	
	Rouzer and Rutter. (See Rutter and Rouzer.)			
	Rowe, Bradford. (See Pierce, Hiram, and George E. Cady.)			
9982	Roys, Franklin, and Edward Wilcox, assignees of Elliot Savage	Disks, metallic, machinery for cutting and bending	Aug. 30, 1853	II.
	Rudduck, Wm., and Henry Perrin. (See Perrin and Rudduck.)			
10089	Ruger, Philip P.	Turning spiral mouldings, machine for	Oct. 4, 1853	XIV.
9904	Ruggles, Stephen P.	Printing-presses	Aug. 2, 1853; antedated Feb. 2, 1853.	XVIII.
9978	Ruggles, Stephen P.	Metal, sheet, machine for cutting	Aug. 30, 1853	II.
10159	Russell, Henry L.	Packing, piston, metallic	Oct. 25, 1853	VI.
9651	Rust, Samuel	Presses, sector	April 5, 1853	XII.
10074	Rutter, Benjamin, and Henry Rouzer	Smut-machines	Oct. 4, 1853	XIII.
	Saby, John, jr. (See Griffin, Jas. K.)			

	Sailor, Samuel H. (See Warnick, C. W., and Fred. Leibrandt.)			
	Sailor, Samuel H. (See Warnick, C. W., and Fred. Leibrandt.)			
	Sailor, Samuel H. (See Abbott, J. G., and A. Lawrence.)			
	Sailor, Samuel H. (See Abbott and Lawrence.)			
9863	Salmon, George B.	Winnowers, grain	July 19, 1853; antedated July 6, 1853.	I.
10075	Salomon, J. C. F	Engines, rotary steam	Oct. 4, 1853	VI.
9785	Sampson, Alexander H	Brick-machines	June 14, 1853	XV.
10264	Sampson, Elnathan	Scales, platform	Nov. 22, 1853	XII.
9845	Sanford, Samuel T	Boring-machines	July 12, 1853	XIV.
10005	Sands, Hiram, and Gary Cummings	Brick-machines	Sept. 6, 1853	XV.
10078	Sargent, James, and D. P. Foster, assignees of E. L. Pratt	Apples, machines for paring	Oct. 4, 1853	XVII.
10161	Sargent, Benjamin P	Shoes, horse, expanding	Oct. 25, 1853	II.
10162	Sargent, Jacob T	Hoes, garden and other	Oct. 25, 1853	I.
	Saroni, Adolph S. (See Schenkl and Saroni.)			
9879	Satterlee, Milton	Planters, seed	July 26, 1853	I.
9652	Savage, Elliott	Screws, wood, machine for cutting the threads of	April 5, 1853	II.
	Savage, Elliott. (See Roys and Wilcox.)			
10316	Sawyer, Joseph, and Lyman Clark	Rasps, peg	Dec. 13, 1853	XVI.
9523	Schaffer, Francis C	Potato-diggers	Jan. 4, 1853	I.
9943	Schenkl, John P., and Adolph S. Saroni, assignees of John P. Schenkl.	Fire-arms, breech-loading	Aug. 16, 1853	XIX.
9900	Scholfield, Jos. A.	Looms, temples for	Aug. 2, 1853	III.
10326	Schnebly, Wm. and Thos	Harvesters, grain and grass	Dec. 20, 1853	I.
	Schultz, Frederick. (See Gilbert, C. and S.)			
10139	Scott, John	Beds, air	Oct. 18, 1853	XVII.
9965	Sears, Henry B., assignee of Jon. Foreman, administrator of E. W. Foreman.	Diving-bells	Aug. 23, 1853	VII.
9847	Seely, O. W., assignee of J. P. Smith and O. W. Seely	Straw-cutters	July 12, 1853	I.
9786	Seely, Samuel J	Kilns, lime	May 17, 1853; antedated Nov. 17, 1852.	XV.
10287	Seibert, Frederick	Leather, machines for polishing	Nov. 29, 1853	XVI.
9834	Semple, Amzi C	Paddles for vessels	July 5, 1853	VII.
9824	Semple, Wm. C., assignee of Amzi C. Semple	Presses	June 28, 1853	XII.
	Serrell, Alfred T. (See Lawrence, John.)			
243	Serrell, Alfred T	Mouldings, machinery for making	May 16, 1848; reissued Jan. 7, 1851; reissued June 21, 1853.	
9928	Seymour, Alfred B	Rolling railroad and other iron	Aug. 9, 1853	II.
9804	Shank, J. R.	Lathe-machines	June 21, 1853	XIV.
9820	Sharps, Christian	Percussion pellets	June 28, 1853; in England, April 22, 1852.	XIX.
10041	Shawk, Abel	Generators, steam	Sept. 20, 1853	VI.
9821	Shepardson, E. E., and E. Lucas	Melodeons and other reed instruments, tuning	June 28, 1853	XVIII.
9587	Sheppard, Louis F	Teeth, artificial	Feb. 15, 1853	XX.
9867	Sherman, Sylvester J	Levels, spirit, mounting	July 19, 1853	VIII.
9805	Sherrod, Walter	Turning machinery, expanding mandrels for	June 21, 1853	XIV.
9712	Sherwood, John T.	Nails, wrought, machines for making	May 10, 1853	II.
	Shield, George, and R. Griffiths. (See Griffiths, R.)			
9569	Shiverick, Benjamin	Furnaces, glass, mode of feeding rosin to the fires of	Feb. 1, 1853	XV
9717	Sibbald, Charles F.	Paint compounds	May 10, 1853; in England, April 15, 1852.	IV.

Alphabetical List.—Continued.

No.	Name of Patentee.	Invention or discovery.	Date.	Class.
10353	Sibbald, Charles F.	Boilers, steam	Dec. 20, 1853	VI.
9718	Sickels, Frederick E.	Rudder of steam-vessels, operating and controlling the	May 10, 1853	VII.
9772	Sickels, Gerard	Bridges, ferry, self-adjusting platform for	June 7, 1853	IX.
10260	Silver, William, jr.	Blasting-powder	Nov. 22, 1853	IX.
10342	Simon, Godfrey	Carriages with shifting seats	Dec. 20, 1853; in England, Mar. 4, 1853.	X.
9601	Simmons, Jonas	Axes, machine for making	Mar. 1, 1853	II.
10238	Sinclair, Robert, jr., and R. F. Maynard	Straw-cutters, feed-rollers of	Nov. 15, 1853	I.
10246	Slaughter, Franklin, assignee of Evan H. Branson	Timber, crooked, machinery for dressing	Nov. 15, 1853	XIV.
10050	Sleppy, Christian	Chains, making	Sept. 27, 1853	II.
234	Sloan, Thomas J	Screw-blanks, machine for arranging and feeding	Feb. 25, 1853; reissued Mar. 29, 1853.	
9688	Sloan, Thomas J	Screw-blanks, machine for pointing and threading	April 26, 1853	II.
	Smith, et al. (See Wager, Richmond, and Smith.)			
	Smith, et al. (See Wager, Richmond, and Smith.)			
9704	Smith, Charles E., assignee of J. Dutton Steele	Rails for railroads	May 3, 1853; antedated Nov. 3, 1852.	X.
10163	Smith, David M.	Clothes-lines, spring-clamps for	Oct. 25, 1853	XVII.
9786	Smith, E. H.	Presses, copying	June 14, 1853	XVIII.
583	Smith, Elihu	Stove, parlor	July 26, 1853	Design.
10253	Smith, Frederick	Water-wheel	Nov. 22, 1853	XI.
	Smith, G., and H. Brown. (See North, Chase, and North.)			
	Smith, G., and H. Brown. (See Abbott and Lawrence.)			
	Smith, Garrettson, and Henry Brown. (See Warnick, C. W., and F. Leibrandt.			
	Smith, G., and H. Brown. (See North, Chase, and North.)			
9977	Smith, Gideon B	Coin, counterfeit, detector	Sept. 6, 1853	XXII.
9776	Smith, Hamilton L., Levi Buttles, and Henry A. Swift, assignees of H. L. Smith.	Paper files	June 7, 1853	XVIII.
10261	Smith, Hiram	Bedstead-rails, &c., cutting screws on, apparatus for	Nov. 22, 1853	XVII.
9549	Smith, Jeremiah P.	Corn-shellers	Jan. 18, 1853	I.
	Smith, J. P., and O. W. Seely. (See Seely, O. W.)			
	Smith, J. R., and D. S. Mackey. (See Mackey and Smith.)			
	Smith, John C. (See Warnick, C. W., and Fred. Leibrandt.)			
10017	Smith, Josiah M.	Moulding-machines, cutter-heads for	Sept. 13, 1853	XIV.
	Smith, Leonard	Smut-machines	Oct. 18, 1839; extended Oct. 18, 1853.	
9959	Smith, Lettie A.	Butter-workers	Aug. 23, 1853	XVII.
9613	Smith, Thaddeus A.	Moulding for cast-iron plates with dove-tailed recesses	Mar. 8, 1853	II.
9653	Smith, William	Weaving corded fabrics	April 5, 1853	III.
	Snell and Chilcott. (See Chilcott, J., and R. Snell.)			
	Snell and Chilcott. (See Chilcott, J., and R. Snell.)			
	Snell and Chilcott. (See Chilcott, J., and R. Snell.)			

10113	Snow, Samuel, and Alex. Hine	Cultivators, rotary root-digging	Oct. 11, 1853	I.
105	Snyder, Elisha S	Grain, machine for separating straw from	June 13, 1848; additional improvement added Aug. 23, 1853.	
9714	Snyder, John H.	Spikes, hook-headed, machines for making	May 10, 1853	II.
9570	Solis, Richard	India-rubber, manufacture of	Feb. 1, 1853	IV.
9560	Southmayd, Horace, assignee of Josiah W. Archbald	Sugar-draining machines	Jan. 25, 1853	IV.
9996	Spafford, Wm. W	Metals, planing-machines for	Sept. 6, 1853	II.
10076	Spence, George S. G.	Ranges, cooking	Oct. 4, 1853	V.
10216	Spencer, George	Ventilator, railroad car	Nov. 8, 1853	V.
10215	Spiller, Thos., and Anthony Crowhurst	Propellers, vibrating, operating	Nov. 8, 1853; antedated Feb. 3, 1853.	VIII.
9995	Spratt, James	Bottle-fastenings	Sept. 6, 1853	XXII.
9602	Spring, Charles A.	Valve, supplemental, in reciprocating steam-engines	Mar. 1, 1853	VI.
9628	Stanbrough, James	Harness	Mar. 22, 1853	XVI.
9950	Stanton, Henry	Fire-arms, discharging breech-loading	Aug. 16, 1853	XIX.
10343	Staples, Solon	Screw for planking ships	Dec. 20, 1853	VII.
	Steele, J. Dutton. (See Smith, Charles E.)			
9699	Steere, Parris J	Barrel-heads, machine for sawing	May 3, 1853	XIV.
	Stephens, T. W., and O. J. Davie. (See Davy & Stephens)			
10121	Stephens, William	Valve-motion of oscillating engines	Oct. 4, 1853	VI.
10350	Stevens, B. F., and Walter Kidder	Shingle-machine	Dec. 20, 1853	XIV.
	Stevens, Joshua. (See Massachusetts Arms Company.)			
10039	Stickney, Ancil	Blow-pipes for enlarging blasting cavities	Sept. 20, 1853; antedated May 10, 1853.	IX.
10040	Stickney, Ancil	Blow-pipe, compound, for enlarging blasting cavities	Sept. 20, 1853; antedated June 11, 1853.	IX.
10022	Stockwell, Leonard A.	Lamps, lard	Sept. 13, 1853	V.
9654	Storm, Wm. Mt	Engines, actuating, process for mixing air and steam for	April 5, 1853	VI.
9689	Stout, Thomas B	Potato-diggers	April 26, 1853	I.
9503	Stratton, Wm. and Matthias	Gas apparatus, portable	Feb. 1, 1853	IV.
10079	Strode, Joseph C.	Ram, hydraulic	Oct. 4, 1853	XI.
10051	Stuart, David	Iron-ware, hollow, annealing	Sept. 27, 1853	II.
9787	Sturgis, John J.	Type-casting machines	June 14, 1853	XVIII.
10214	Sturtevant, Safford E.	Shafts of vehicles to the axles, attaching	Nov. 8, 1853	X.
10319	Sully, James, and John Butter, assignees of John Butter	Brick, machines for moulding	Dec. 13, 1853	XV.
10016	Sumner, Samuel B.	Boot-jacks	Sept. 13, 1853	XVI.
10344	Sweet, Henry L.	Sewing on binding, guides for	Dec. 20, 1853	III.
10172	Sweet, Samuel	Spark-arrester	Oct. 25, 1853	VI.
9689	Swett, James H.	Spike-machines, arrangement of the die-rollers in	Mar. 29, 1853	II.
	Swift, et al. (See Smith, Hamilton L.)			
10038	Sylla, Philo, and Augustus Adams	Harvesters, grain and grass	Sept. 20, 1853	I.
9774	Talbot, Ebenezer	Boring rock, machine for	June 7, 1853	IX.
	Talbot, John G., and Schuyler Briggs. (See Briggs & Schuyler.)			
9563	Taltavul, Peter	Omnibus registers	Jan. 25, 1853	X.
10191	Taplin, John A.	Grain-separators, straw and	Nov. 1, 1853	I.
9596	Taylor, Amos B., and Stephen Wilcox, jr	Looms, let-off motion for	Feb. 22, 1853	III.
9604	Taylor, E. S.	Bedstead-fastenings	Mar. 1, 1853	XVII.
9700	Taylor, James S.	Hat-bodies, machines for shrinking	May 3, 1853	III.
10276	Taylor, Robert R.	Hammers, steam, arrangement of valves, ports, and passages for operating.	Nov. 29, 1853	II.

Alphabetical List.—Continued.

No.	Name of Patentee.	Invention or discovery.	Date.	Class.
9620	Ten Eyck, Peter	Chairs, rocking	Mar. 15, 1853	XVII.
10277	Terry, Silas B	Clocks, balance, new mode of applying the vibrating-spring of	Nov. 29, 1853	VIII.
9949	Tewksbury, Abijah R	Boat or scow	Aug. 16, 1853	VII.
	Thomas, Samuel T., and Edward Everett. (See Everett & Thomas.)			
10239	Thompson, John H., James M., and Hosea Q	Boots and shoes, machine for trimming soles of	Nov. 15, 1853	XVI.
9905	Thompson, Nathan, jr	Boilers, steam, mode of indicating the height of water in	Aug. 2, 1853	VI.
10140	Thompson, Nathan, jr	Life-preserving bucket	Oct. 18, 1853	VII.
10141	Thompson, Nathan, jr	Life-preserving seat	Oct. 18, 1853	VII.
9963	Thompson, S. C., G. W. Westerfield, and H. Ritchie, assignees of Henry Ritchie.	Padlock	Aug. 23, 1853	II.
9641	Thompson, Thomas C	Sewing-machines	Mar. 29, 1853	III.
9865	Thompson, William H., and Richard H. Plummer	Flyers, compressors for	July 19, 1853	III.
9732	Thorn, Wm. J.	Combs, pocket	May 17, 1853	XXI.
9806	Thornton, Wm. McK	Collars, horse	June 21, 1853	XVI.
10100	Thurman, Wm. J., assignee of Richard H. Pindell	Planing-machine	Oct. 4, 1853	XIV.
9614	Tiffany, Joel	Shingles, machines for dressing	Mar. 8, 1853	XIV.
9835	Tilghman, Noah J	Crow killer	July 5, 1853	XXII.
9690	Tillman, Samuel D	Stoves, radiators for	April 26, 1853	V.
10217	Tillman, Samuel D	Musical scale, revolving	Nov. 8, 1853	XVIII.
10356	Tompkins, D. and D. F., assignees of J. C. Conklin	Axes, pick	Dec. 20, 1853	II.
	Toole, W. S., et al. (See Parker, Jas. M.)			
10192	Towers, Wm. H	Pens, metallic	Nov. 1, 1853	XVIII.
10240	Towers, Wm. H	Registers, hot-air	Nov. 15, 1853	V.
10345	Towers, Wm. H	Shoes, horse	Dec. 20, 1853	II.
10018	Townsend, Richard H	Valves of steam-engines, working the	Sept. 13, 1853	VI.
9603	Townshend, William	Looms	Mar. 1, 1853	III.
10241	Townshend, William	Looms	Nov. 15, 1853	III.
9640	Traeyser, George	Pianos, vertical	Mar. 29, 1853	XVIII.
9866	Trayser, Philip P	Spike-machines	July 19, 1853	II.
9864	Treadwell, Ephraim	Ovens	July 19, 1853	V.
10164	Trees, James	Propellers	Oct. 25, 1853	VII.
9655	Trinks, Gregor	Brakes for railroad cars	April 5, 1853	X.
10327	Tripp, Hiram N	Rakes, power	Dec. 20, 1853	I.
	Tripp, S. D. (See E. L. Norfolk.)			
10288	Trofatter, Samuel J. and Charles H	Boot-counters, machines for skiving	Nov. 29, 1853	XVI.
	Tryday, G. H. (See North, Chase & North.)			
	Tupper & Merrill. (See Merrill & Tupper.)			
10006	Turner, Samuel H	Ink, printers'	Sept. 6, 1853	IV.
	Tuttle & Porter. (See Porter & Tuttle.)			
9664	Tuttle, Edward A	Registers, hot-air	April 12, 1853	V.
9807	Tuttle, J. H	Saws	June 21, 1853	XIV.
10221	Twining, Alex. C	Ice, manufacturing	Nov. 8, 1853; in England, July 3, 1850.	XXII.

9701	Tyler, Charles N	Fire-arms, repeating	May 8, 1853	XIX.
	Tyng, L. B., W. Aldrich, and M. Marshall. (See Marshall, Moses.)			
9810	Tyson, Wm. F	Propellers for canal-navigation	June 21, 1853; antedated Dec. 21, 1852.	VII.
10346	Unger, Elias	Timber, machine to cut polygonal surfaces in	Dec. 20, 1853	XIV.
9851	Union Patent Sofa Railroad Car-seat Manufacturing Company, assignees of Charles P. Bailey.	Car-seats, railroad	July 12, 1853	X.
9656	Updegraff, John J	Stoves	April 5, 1853	V.
9666	Upton, Benjamin Franklin	Daguerreotyping, mercury baths for	April 12, 1853	XVIII.
	Valentine, Elijah. (See Bradway, Abel.)			
9906	Van Anden, William	Chairs, railroad, machinery for making	Aug. 2, 1853	IX.
9942	Van Anden, William	Hammer, trip	Aug. 16, 1853	II.
	Van Cleve, Jno. W. (See Greer, James, & Co.)			
10080	Vandewater, Henry	Water-wheel, turbine	Oct. 4, 1853	XI.
9958	Van Syckel, Samuel	Grate-bars	Aug. 23, 1853	V.
10114	Van Valkenburgh, Jacob L	Winnowers, shaking-shoes for	Oct. 11, 1853	I.
	Van Zant, P., and Wm. Watson. (See Watson & Van Zant.)			
	Vedder & Ripley. (See G. W. Eddy.)			
572	Vedder, N. S	Stove, cook	June 28, 1853	Design.
609	Vedder, N. S	Stove, cooking	Nov. 8, 1853	Design.
9890	Vettercke, Frederick G	Dyeing compounds	July 26, 1853	IV.
10173	Vogle, Kasimir	Looms for making weavers' harness	Oct. 25, 1853	III.
10165	Vose, Albert	Yokes, ox	Oct. 25, 1853; antedated Aug. 10, 1853.	I.
567	Vose, Samuel D	Stove, parlor	May 24, 1853	Design.
573	Vose, Samuel D	Stove, cooking	June 28, 1853; antedated May 2, 1853.	Design.
574	Vose, Samuel D	Stove, cooking	June 28, 1853; antedated May 2, 1853.	Design.
575	Vose, Samuel D	Stove, cooking	June 28, 1853; antedated May 2, 1853.	Design.
576	Vose, Samuel D	Stove, parlor	June 28, 1853; antedated May 2, 1853.	Design.
9733	Wade, William Wheaton	Castors for furniture	May 17, 1853	II.
613	Wager, J., V. Richmond, and H. Smith	Stove, parlor	Dec. 20, 1853	Design.
614	Wager, J., V. Richmond, and H. Smith	Stove, coal, cylinder	Dec. 20, 1853	Design.
9750	Wagener, Jeptha A	Harvesters, clover	May 24, 1853	I.
9615	Wagener, John A	Cannon-sight	Mar. 8, 1853	XIX.
	Wagoner, J. K., and L. L. Gilliland. (See Gilliland & Wagoner.)			
10193	Waite, Increase S	Turning cylinders of wood, machine for	Nov. 1, 1853	XIV.
	Walback, L. A. B. (See Wm. F. Lucas, administrator, &c.)			
9734	Walcott, Halsey D	Cutters, graduated, for cloth and other substances	May 17, 1853	XXI.
9751	Walker, Alexander J	Lamps, spirit	May 24, 1853	V.
9642	Walker, M., Daniel S., and Matthew, jr	Fences, wire	Mar. 29, 1853	IX.
10328	Walker, Robert P	Hulling and scouring coffee, machines for	Dec. 20, 1853	I.
	Ward & Gerould. (See Gerould & Ward.)			
10090	Ward, John H	Gold-washers	Oct. 4, 1853	II.
9597	Ward, Lauren, administrator of Richard Ward, J. B. Hubbell, and H. C. Hubbell.	Turning irregular forms, machines for	Feb. 22, 1853	XIX.
9822	Ward, Lauren, administrator of Richard Ward, deceased	Turning irregular forms, machines for	June 28, 1853	XIV.
10091	Ware, Charles T. P	Propellers	Oct. 4, 1853	VII.

Alphabetical List.—Continued.

No.	Name of Patentee.	Invention or discovery.	Date.	Class.
10242	Warner, Jonathan E.	Staves, machine for finishing the ends of	Nov. 15, 1853	XIV.
9999	Warner, Thomas	Gun-barrels, twisted, process for making	Sept. 6, 1853	XIX.
603	Warnick, C. W., and Frederick Leibrandt, assignees of Garretson Smith and Henry Brown.	Stoves	Oct. 4, 1853	Design.
554	Warnick, C. W., and F. Leibrandt, assignees of S. H. Sailor	Stove, cooking	April 19, 1853	Design.
558	Warnick, C. W., and F. Leibrandt, assignees of S. H. Sailor	Stove, cooking	April 26, 1853	Design.
559	Warnick, C. W., and F. Leibrandt, assignees of John C. Smith	Range, portable	April 26, 1853	Design.
10303	Warren, Ira	Syringes, shower	Dec. 6, 1853	XX.
	Warren, Josiah. (See Westbrook, L.)			
10142	Warren, Thomas E.	Car-bodies, iron	Oct. 18, 1853	X.
9880	Warren, William M	Car-seats, railroad	July 26, 1853	X.
9960	Warren, William M	Car-seats, railroad	Aug. 23, 1853	X.
10052	Waskey, Robert	Smut-machines	Sept. 27, 1853	XIII.
546	Waterman, Charles	Sewing-bird	Feb. 15, 1853	Design.
10243	Waterman, Henry	Valves, safety, for locomotive engines	Nov. 15, 1853	VI.
578	Waterman, Nathaniel	Waffle-baker	July 5, 1853	Design.
9907	Waterman, Stephen	Boiler explosions, steam, mode of obviating the danger from	Aug. 2, 1853	VI.
9930	Watson, P. H., and E. S. Renwick	Harvesters and binders, grain	Dec. 6, 1853; antedated June 6, 1853.	I.
10194	Watson, Peter H	Steam, generating and condensing	Nov. 1, 1853; antedated May 2, 1853.	VI.
9524	Watson, William	Tongueing and grooving machines	Jan. 4, 1853	XIV.
10857	Watson, Wm., and P. Van Zant, assignees of Wm. A. Martin	Siedlitz powders, machine for folding	Dec. 20, 1853	XXII.
10297	Watt, James	Hammers, steam-valve, arrangement for	Dec. 6, 1853	II.
9691	Watts, Alfred J	Gold, processes for preparing	April 26, 1853	II.
10143	Weatherby, J. W	Carpet-stretchers	Oct. 18, 1853	XVII.
9735	Weatherhead, Davis L.	Dies, block, cleansing and cooling, in rivet-machines	May 17, 1853	II.
	Webb, Joseph W. (See Gould, Benj.)			
	Weeks, Asa, and R. M. Evans. (See R. M. Evans.)			
9998	Weeks, Henry L.	Gins, cotton	Sept. 6, 1853	III.
9868	Weildon, Thomas C	Wigs, manufacture of	July 19, 1853	XXI.
10298	Wellman, George	Cards, machine, cleaning	Dec. 6, 1853	III.
9911	Wells, J. G., assignee of Julius Herriot	Type, elastic, for printing on irregular surfaces	Aug. 2, 1853	XVIII.
	Wells, D. G., and H. Allen. (See Allen & Wells.)			
	Wells, D. G., and H. Allen. (See Allen & Wells.)			
9846	Wells, Ephraim B.	Saws, adjusting dishing	July 12, 1853	XIV.
10195	Wemple, J. V. A.	Grain-separators	Nov. 1, 1853	I.
10305	Werner, Carl E.	Stills, condensers for	Dec. 6, 1853	IV.
9870	Westbrook Leonardo	Gutta percha stereotype compositions	July 19, 1853	IV.
246	Westbrook, L., assignee of Josiah Warren	Composition for stereotype plates	April 25, 1846; reissued July 26, 1853.	
	Westerfield, G. W., et al. (See Thompson, S. C., et al.)			
	Westerman, et al. (See Richardson, J. R., et al.)			

9980	Weston, Charles	Leather-splitting, machines for	Aug. 30, 1853 — XVI.
10054	Wethered, Chas. E., John, and Samuel	Engines, actuating, use of steam for	Sept. 27, 1853; in England, May 25, 1853. — VI.
9605	Wheeler, William	Curry-combs, construction of	Mar. 1, 1853 — II.
	Wheeler, William, N. C. Harris, and W. P. and E. N. Merriam. (See Merriam, W. P.)		
	Wheeler, Wm. (See Kellogg, Chas. H.)		
	Whipple, Cullen. (See New England Screw Company.)		
9715	Whipple, Geo. A.	Iron, malleable, directly from the ore, manufacturing	May 10, 1853 — II.
	White, et al. (See Brookfield & White.)		
10244	White, Jonathan	Shovel-blades, uniting to handle-straps	Nov. 15, 1853 — II.
9588	White, Rand B.	Saw-setting machine	Feb. 15, 1853 — II.
10299	Whitemore, John E.	Water-wheels, overshot	Dec. 6, 1853 — XI.
	Whitman, L. M. (See Wise, Samuel G.)		
	Whitney, B., and David Marsh. (See Marsh, David.)		
10145	Whittaker, Harry	Propellers, screw, application of high-pressure engines to	Oct. 18, 1853 — VII.
10116	Whittemore, D. H.	Vegetable-cutters	Oct. 11, 1853. — I.
9679	Wickersham, William	Sewing-machines	April 19, 1853 — III.
9773	Wight, George W	Presses, screw, for packing boxes	June 7, 1853 — XII.
9981	Wigston, William	Gas, purifying apparatus for	Aug. 30, 1853 — IV.
	Wilcox & Roys. (See Roys & Wilcox.)		
	Wilcox, Stephen, jr., and Amos B. Taylor. (See Taylor & Wilcox.)		
	Wilder, et al. (See Richardson, Westerman & Wilder.)		
249	Wilder, Aretus A.	Planing-machines	Dec. 21, 1852; antedated July 17, 1852; reissued Nov. 15, 1853.
9808	Wilder, J. B.	Ploughs, hill-side	June 21, 1853 — I.
9667	Wilgus, Charles	Washing-machines	April 12, 1853 — XVII.
9525	Wilkinson, Jeptha A.	Printing-presses	Jan. 4, 1853; in England, Sept. 23, 1842. — XVIII.
9871	Willcox, Austin O.	Engines, air	July 19, 1853 — VI.
9909	Willcox, Austin O.	Engines, hot-air	Aug. 2, 1853 — VI.
9869	Williams, Charles	Bristles for brushes, preparation of	July 19, 1853 — XVII.
	Williams, Daniel, and Thos. Baylis. (See Baylis & Williams.)		
	Williams, David, and Henry L. Cryder. (See Cryder & Williams.)		
10318	Williams, James B., assignee of Joel R. Bassett	Pump-valves	Dec. 13, 1853 — XI.
10218	Williams, W. D.	Brakes, wagon	Nov. 8, 1853 — X.
10042	Willis, Oscar	Water-wheels, saw for	Sept. 20, 1853 — XI.
10200	Williston, George	Rails, machines for straightening or curving	Nov. 1, 1853 — IX.
10317	Wilmington, John	Metal, sheet, machines for cutting	Dec. 13, 1853 — II.
	Wilmot, Samuel R. (See Kent, Joseph.)		
9558	Wilson, H. F., and S. E. Fenwick, assignees of Wm. H. Lazelle	Apples, machines for paring	Jan. 25, 1853 — XVII.
	Wilson, Henry H., and Edmund H. Bard. (See Bard, E. H.)		
	Wilson, J. G., and J. T. Bruen. (See Bruen & Wilson.)		
9716	Winder, D.	Engines, locomotive	May 10, 1853 — VI.
9979	Winslow, Daniel, and P. D. Cummings	Paper-files	Aug. 30, 1853 — XVIII.
10347	Wisdom, William	Feathers, cleansing hair and, from insects, &c.	Dec. 20, 1853 — XVII.
10123	Wise, Samuel G., assignee of L. M. Whitman	Ploughs, cultivating	Oct. 11, 1853 — I.
10219	Wisner, Joel	Washing-machines	Nov. 8, 1853 — XVII.
9551	Witherow, Samuel, assignee of Wm. H. and Samuel Witherow	Planters, seed	Jan. 18, 1853 — I.
9589	Wolf, David and Herman	Planters, seed	Feb 15. 1853 — I.

Alphabetical List.—Continued.

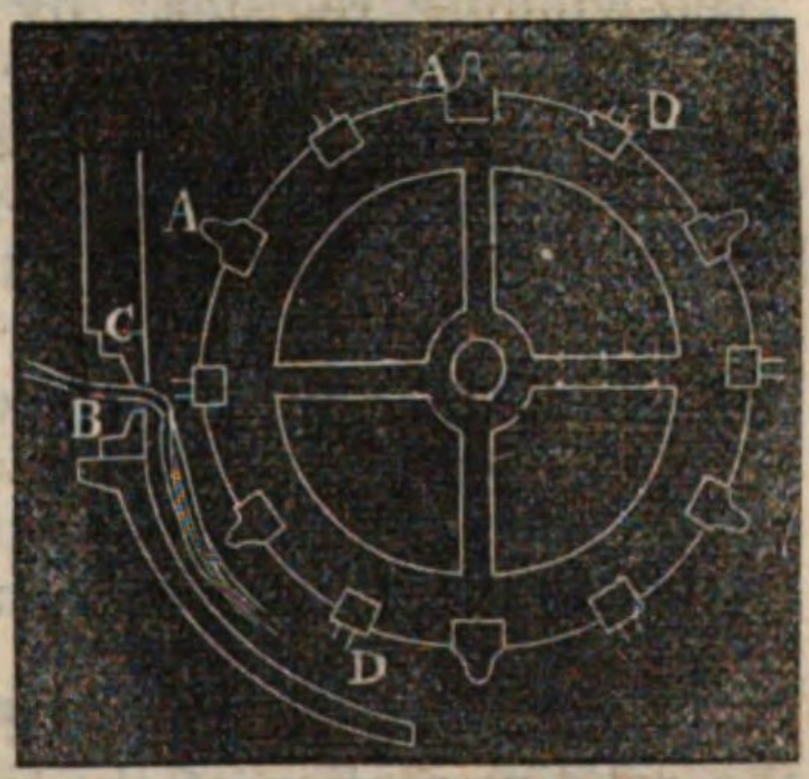
No.	Name of patentee.	Invention or discovery	Date.	Class.
9789	Woodbury, J. A., Joshua Merrill, and George Patten	Engines, air	May 17, 1853; in England, Jan. 5, 1853.	VI.
10081	Woodbury, Jas. A., Joshua Merrill, and George Patten	Engines, air	Oct. 4, 1853; in England, Jan. 5, 1853.	VI.
10115	Woodruff, Horace W.	Metals, treating, while in the molten state	Oct. 11, 1853	II.
9678	Woolson, Amasa	Cloth-dressing, gig-mills for	April 19, 1853	III.
10278	Wrenn, R. C.	Planters, seed	Nov. 29, 1853	I.
10082	Wright, Elizur	Cock, stop	Oct. 4, 1853	XI.
	Wright, E. S., and J. A. Rapp. (See Rapp & Wright.)			
9686	Yale, C. D., assignee of James Bolton, M. D.	Furnaces, hot-air	April 26, 1853	V.
10144	Yale, Linus	Locks, door	Oct. 18, 1853	II.
9850	Yale, Linus, jr.	Locks for banks	July 12, 1853	II.
	Young, James. (See Middleton, John W.)			
9908	Young, Jesse	Furnaces, hot-blast, arrangement of pipes for	Aug. 2, 1853	V.
106	Zimmerman, George F. S.	Winnowers and threshers	Feb. 8, 1853; additional improvement Sept. 13, 1853.	I.
9579	Zimmerman, G. F. S.	Winnowers and threshers	Feb. 8, 1853	I.
10053	Zimmerman, William	Smut-machines	Sept. 27, 1853	XIII.

DESCRIPTIONS AND CLAIMS OF PATENTS,

ISSUED IN THE YEAR 1853.

ILLUSTRATED WITH CUTS.

No. 9,512.—James P. Arnold, of Louisville, Ky.—*Improvement in Hackling Hemp.*—Patented January 4th, 1853.



The first part of this improvement consists in the method of hackling hemp (after it has been suitably prepared by rotting, breaking, and scutching), by subjecting it to the action of a series of mixed combs D (see fig.) and beaters A; the beaters of uniform radial length, but the teeth of the combs gradually increasing in length, from the point where the fibre is first subjected to their action (between the rests B and C), to the point at which the operation is completed. By this method of operation a larger per centage, and a better quality of hemp is obtained from a given quantity, than by the methods heretofore adopted. The proportion of tow is diminished in the same ratio as the long staple is increased, which is much the most valuable commodity.

The second part consists of a stotted rest, open at one end, and acting in connexion with a projecting concave that holds the fibre in the proper position against the cylinder, and keeps it properly spread. The narrow slotted rest also protects the hand of the attendant.

Claim.—The method of hackling hemp by subjecting it to a series of mixed beaters and combs, the teeth of the combs varying in length; also a rest having a narrow slot open at one end, in combination with a concave projecting beyond the end of the cylinder, at the open end of the rest.

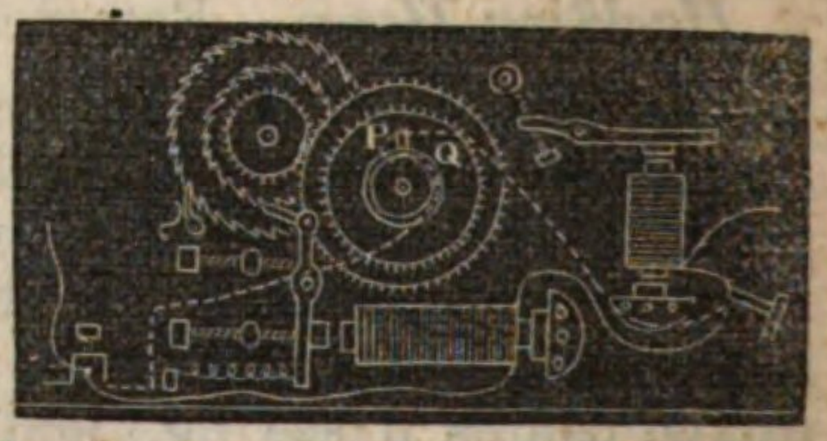
No. 9,513.—John T. Bruen and James G. Wilson, of Hastings, N. Y. —*Improvement in Sawing Marble and other Stone.*—Patented January 4th, 1853.

This invention consists in lifting the saw-frame at, or sufficiently near the middle of its range of motion, to effect the contemplated

purpose, *i. e.* that the sand may be carried under the edge of the saw blade by means of inclined projections on the ways over which the wheels run. Also, in interposing india rubber, or its equivalent, between the ways and the inclined projections, to reduce the concussions which would otherwise take place when the wheels strike the said inclined projections.

"What we claim as our invention is, lifting the saws (in sawing marble and other stone), at or sufficiently near the middle of the stroke to effect the specified purpose. Also, interposing india rubber between the ways and the inclined projections which lift the saw-frame."

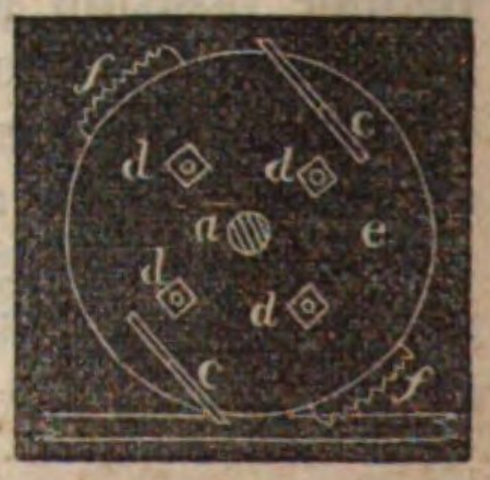
No. 9,514.—James J. Clark, of Philadelphia, Pa.—*Improvement in the Construction of Telegraph Registers.*—Patented January 4th, 1853.



This improvement is denominated the "self-winding register," by the inventor, and consists in attaching an adaptation to the ordinary Morse telegraph register, of a second electro-magnet, an armature attached to one extremity of a lever, and a click at the other extremity, this click works into a ratchet wheel. To the lower extremity of the lever, behind the armature, a reacting spring is attached. When the spring is wound up to a certain point, the current through the winding magnet is cut off by establishing a cross connexion. (See figure.)

"I claim as my invention the regulating the current through the coil of the electro-magnet of the self-winding apparatus, by means of the relative motion of the spring shaft and spring box, so that when the spring has been wound up to a certain point, that current shall be cut off—cease to act."

No. 9,515.—John D. Dale, of Philadelphia, Pa.—*Improvement in Machinery for Planing Mouldings.*—Patented January 4th, 1853.



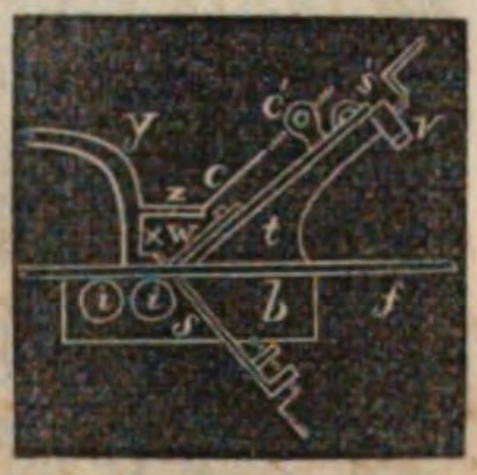
The object of this invention is to plane a plank into a series of mouldings, and separate them from each other at one operation. (See fig.)

The nature of this invention consists in arranging a series of moulding cutters or plane irons, side by side, and along the length of, and around an axis, *a*, of rotation; when this is combined with rotating saws, or their equivalents, for slitting or separating the several mouldings at the same time, whereby the operations are not only simplified, but accurate work insured. In this way any number of sets of moulding plane irons may be arranged side by side. At each end of this stock of plane irons *c c*, and saws *f f*, are arms, and to the outer end of these arms is secured a metal bar, and to the under surface of this bar are secured a series of plates, which

may be shifted at pleasure, for adjustment; there is one of these plates for each set of moulding cutters. Spaces are left between the cutters for the passage of the saws; *d d d d*, screw bolts and nuts.

"I claim as my invention, a method of arranging a series of sets of moulding cutters side by side, along the length of a rotating stock, combined with rotating saws, interposed and projecting beyond the periphery of the cutter, for separating the several mouldings formed on one plank, whereby the operations of planing the several mouldings, and separating them, are performed at one and the same operation, and accuracy of work secured."

No. 9,516.—JOHN D. DALE, of Philadelphia, Pa.—*Improvement in Machinery for "Planing Mouldings."*—Patented January 4th, 1853.



In this improved machine the planing is effected by one planing iron, which, during the passage of the wood under it, is fixed, for each successive operation is moved nearer to the bed, so as to produce the moulding by successive operations. The first part consists in attaching the planing iron to a hinged sliding adjustable stock *v*, so that the plate *b*, to which the planing iron *w* is attached, can be turned up so as to sharpen the planing iron without detaching it, and can be set for each succeeding cut, by an adjusting screw. The second part consists in so connecting the sliding adjustable plane iron with a movable mouthpiece to make pressure on the surface to be planed, directly in front of the plane iron, and of corresponding form, that as the plane iron is adjusted for each succeeding shaving, the said mouth-piece shall receive a corresponding adjustment by a differential movement being imparted to it, that the relative positions of the two may be proportional to the thickness of the shaving to be cut; *i i*, are rollers.

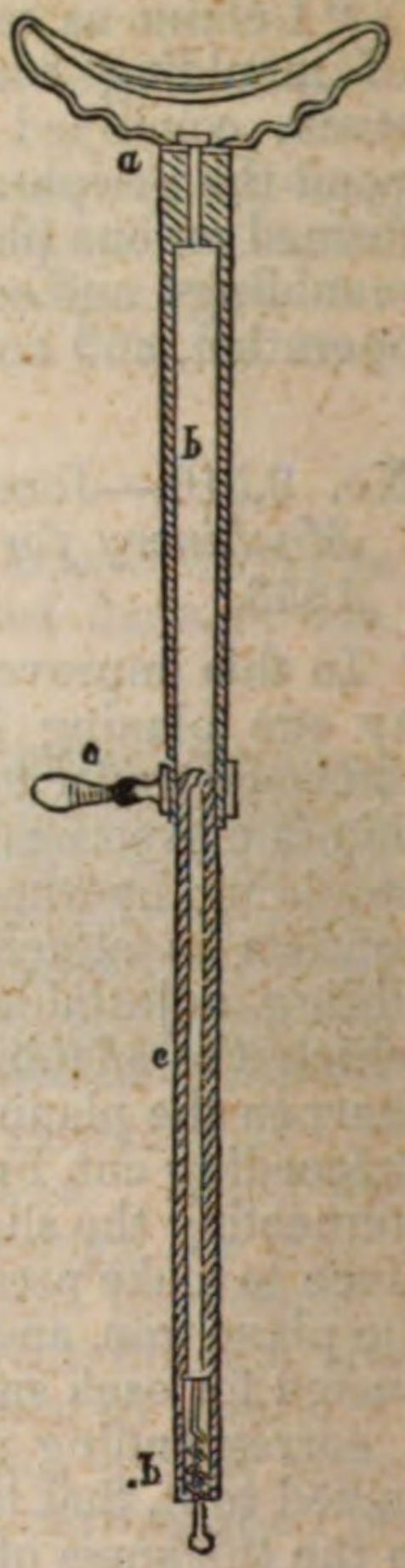
"What I claim as my invention, is attaching the planing iron to a plain stock which is hinged to an adjustable sliding plate, by means of which combination the plane iron can be readily thrown up to be sharpened without the necessity of taking it out of the machine. Also, the adjustable sliding plane, when combined with the separate movable mouthpiece, so that in setting the plane iron a differential motion is given to the mouthpiece in order to vary to any desired thickness the shaving, that when the plane is set to cut a thick or thin shaving, the mouthpiece shall receive a corresponding set."

No. 9,517.—GEORGE FEAGA & GEORGE W. FEAGA, of Frederick, Md.—*Improvement in Machinery for Separating Grain from Garlic, Smut and other Impurities.*—Patented January 4th, 1853.

The nature of this invention consists in washing the grain in water, by which means the smut is loosened, and the smut, garlic, and all other light impurities will rise and pass off with the water; and then carrying the washed grain by elevators and passing it through chambers heated by steam or hot air, where it is thoroughly dried,

and thence to the stones for grinding. The trough in which the grain is washed, has a shaft passing through it provided with a series of spirally fixed arms for stirring up and carrying forward the grain. The impurities pass off through an opening in the top of the trough. The elevators are perforated at their bottoms to allow the water to drain off.

"What we claim as new in this method of separating grain from smut and other impurities, is washing it in a trough or reservoir of water where the separation takes place, and then conveying the washed grain to a drying apparatus, where it is thoroughly dried."



No. 9,518.—JOHN S. GALLAHER, of Washington City, D. C.—*Improvement on the Crutch or Support for Cripples.*—Patented January 4th, 1853.

This improvement consists in constructing a crutch with a compound corrugated elliptical spring and air cushion top: which top is arranged to revolve horizontally upon the staff (see fig. at *a*) part of the crutch. The staff may be made in one solid piece, or so as to close up or fold. Appertaining to this crutch is also a "sliding joint," an "extension ferrule" and "elastic bulb."

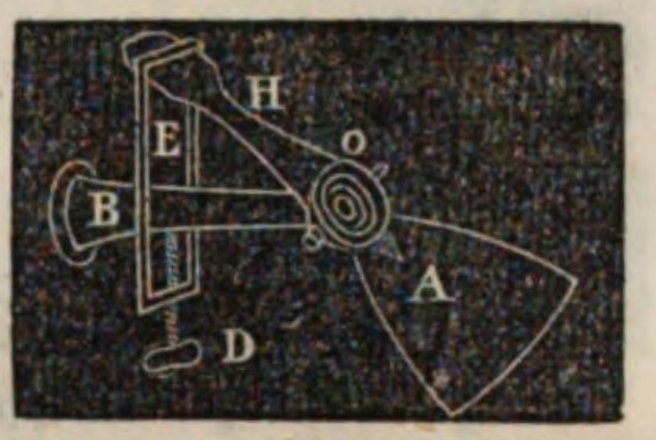
"I claim the revolving plane or corrugated spring top, in combination with an air cushion. Also, in combination with the revolving spring top the sliding joint. And in combination with the *sliding* staff the revolving handle, extension ferrule, and elastic bulb."

No. 9,519.—JOHN C. BIDWELL & JOHN HALL, of Pittsburgh, Pa. Executors of SAMUEL HALL, late of Manchester, Pa.—*Improvement in the "Hill-side Plow."*—Patented January 4th, 1853.

This improved plow is constructed with a land side of the usual form for a double plow, and provided with two plow-shears pointing in opposite directions. Two mould-boards are hinged (at E E and N N) to the land side by projecting ears M M, on the under side of both the mould-boards and land side, so that they will readily turn forward and backward when required. The respective hinges of each mould-board are at a considerable distance from each other, thus allowing free play to either mould-board without disturbing the other. The beam and handles turn upon a pivot, so that its direction can at any time be readily reversed.

"What we claim as the invention of Samuel Hall is the manner of arranging the mould-boards upon the land side, to wit: placing their hinges at such a distance from each other on each side of the centre of the land side, that each mould-board may be supported by the edges as far as practicable from the hinges, and rest upon grooves near the middle of the land side."

No. 9,520.—Richard Hollings, of Boston, Mass.—*Improvement for regulating the spread of Water when discharged from a "Hose-pipe."*—Patented January 4th, 1853.



This invention consists in hanging a flat spreading pan A, to the nose of the hose-pipe B, in such manner as to admit of vibration in combination with adjusting apparatus for varying its position, so that the water, when discharged from the pipe, strikes more or less directly upon said pan, and is spread into a sheet of greater or less expanse. The inventor denominates this improvement the "Regulating Water Spread."

The instrument is made of brass, and is a flat triangular shaped pan, having a handle H, at one angle, and raised lateral edges.

"What I claim is hanging the spread to the hose-pipe by means of pins passing through the collar O, which allow it to vibrate, in combination with adjusting apparatus for varying the position of the spread."

No. 9,521.—Benjamin F. Jenkins and Luke L. Knight, of Barre, Mass —*Improvement in Machinery for turning irregular forms.*—Patented January 4th, 1853.

This invention relates to that description of lathe in which the work and cutters both revolve, and the irregularity of form is produced by the vibration of the axis of the work, and of the whole or part of the cutters. The improvements consist in certain simple and effective means of controlling the vibrations of the said axis.

"What we claim is giving the necessary relative vibrations to the cutter cylinder and work carriage by crank pins or excentrics, upon the axis of a pair of toothed wheels, of which one is toothed all round its periphery and the other upon any suitable portion of its periphery, the latter wheel having a constant rotary motion applied which gives an intermittent rotary motion to the former wheel, whereby the said cutter cylinder and work carriage receive the one a constant vibratory motion, and the other an intermittent vibratory motion."

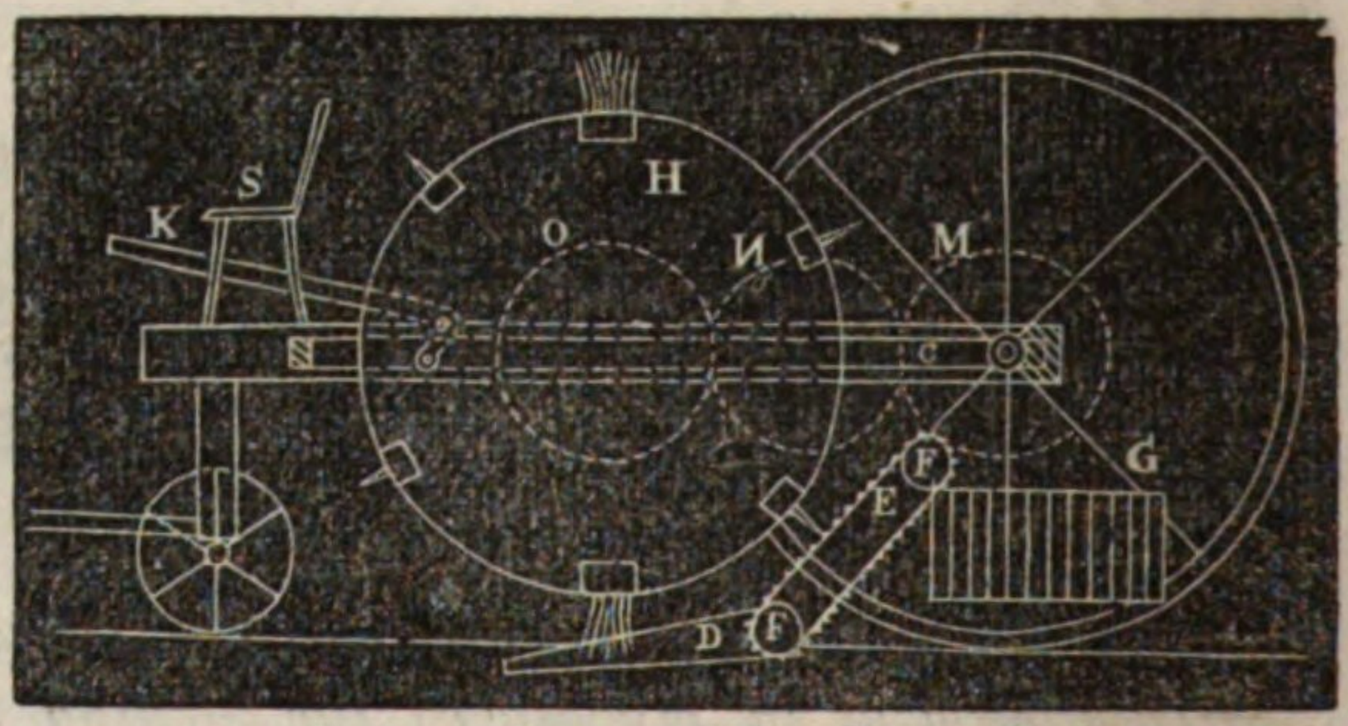
No. 9,522.—Merritt Peckham and Lucius O. Palmer, of Utica, N.Y. —*Improvement in Machinery for "Washing Gold from the deposits in which it is found."*—Patented January 4th, 1853.

This improvement consists in the arrangement of cylinders revolving

within a trough, the smaller one constructed of sheet iron, within the larger which is made of iron rods. The larger cylinder A (see fig.), is divided into four separate parts by sheet iron wings or partitions, and firmly connected with the smaller cylinder B, both being keyed to a shaft and made to revolve with it. The trough is of sufficient depth to receive the cylinder nearly to its axis. The interior cylinder, which is half the diameter of the larger, has indented ends and wings attached. The rods forming the larger cylinder are one-eighth of an inch apart, forming a fine screen. This description is very general.

"We claim the interior cylinder with indented ends and wings attached to operate as a discharging apparatus, attached to the interior of an inclined revolving screen."

No. 9,523.—FRANCIS C. SCHAFFER, of Brooklyn, N.Y.—*An improved implement for digging Potatoes.*—Patented January 4th, 1853.



This invention consists in the arrangement and construction of an endless apron E, and scoop D, by the combination of which potatoes are dug and scooped from the hills, and conveyed by the aid of a brush cylinder into a proper receptacle G, or box; the potatoes being thoroughly cleaned from dirt in consequence of passing up the inclined apron. M, N, O, gear wheels; H, cylinder; S, driver's seat; K, regulating lever.

"I claim the arrangement and combination of the scoop and endless apron, by which the potatoes are scooped from the hills, and the dirt separated from them as they pass up the endless apron into the receptacle."

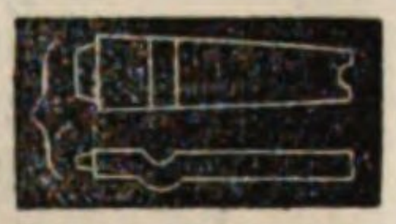
No. 9,524.—WILLIAM WATSON, of Chicago, Ills.—*Improvements for "Tonguing and Grooving Lumber."*—Patented January 4th, 1853.

This improvement consists in the construction and operation of a series of tonguing and grooving knives and chisels which are mounted in two (parallel) stocks. The stocks are stationary when adjusted and secured to a bed or bench. The board to be matched is drawn or forced along stationary ways between the planes; and the knives are secured by screws to the plane stocks, and can be conveniently adjusted or set, to cut different depths: the first set cutting a proportionable part of the required depth, the second deeper, and the third series of knives cutting to the desired, or ordinary depth, upon each side of the tongue. Between each set of knives are gouges or instruments to

remove the surplus wood. The grooving is performed simultaneously upon the opposite edge of the board and in a similar manner, but by one set of knives or gouges. The knives and chisels are set at right angles.

"What I claim is the method of tonguing and grooving boards by means of knives arranged in the sides of the plane of the sides of the tongues or grooves, with their cutting edges inclined towards their rear extremities, so as to cut gradually deeper and deeper as the board passes them, when in combination with cutting instruments arranged between these side knives to reduce or remove the surplus wood which is severed by them."

No. 9,525.—JEPTHA A. WILKINSON, of Fireplace, N. Y.—*Improvement in the construction and operation of Printing Presses.*—Patented January 4th, 1853.



This improvement consists in forming cylinders of metal with means to secure type for printing upon their surface, combined with means of folding and cutting the sheets when printed.

The inventor claims as follows: "The application of notches or grooves, and beads or projections on the shafts of type tapered to the radii of a circle, for the purpose of locking said type together on a cylinder. 2d. The mode of forming column lines, rules, rings, and blocking, so that they are adapted to the cylinder and to the type. 3d. The mode of constructing the type cylinder. 4th. The mode of constructing the compositor's stick in the form of a part of a cylinder. 5th. The mode of constructing the galley or proof cylinder. 6th. The mode of constructing the type holder or grab to enclose, and securely lift a mass of type from the galley or proof cylinder. 7th. The application and arrangement of the pulleys, bands, and guide plates for carrying the paper. 8th. The application of the press rollers to compress the folded paper, and lead that out of the folding apparatus, and the combination of the standing roller, revolving shear, standing shear, valve, and cam, to effect the cutting of the folded paper as it issues from the rollers, and guide the first cut edge clear of the standing shear."

No. 9,526.—RUDOLPH KRETER, of New York, N. Y., Assignor to ROBERT NUNNS and JOHN CLARK, of New York aforesaid.—*Improvement in Machinery for Covering the Hammers of Piano-Fortes.*—Patented January 4th, 1853.

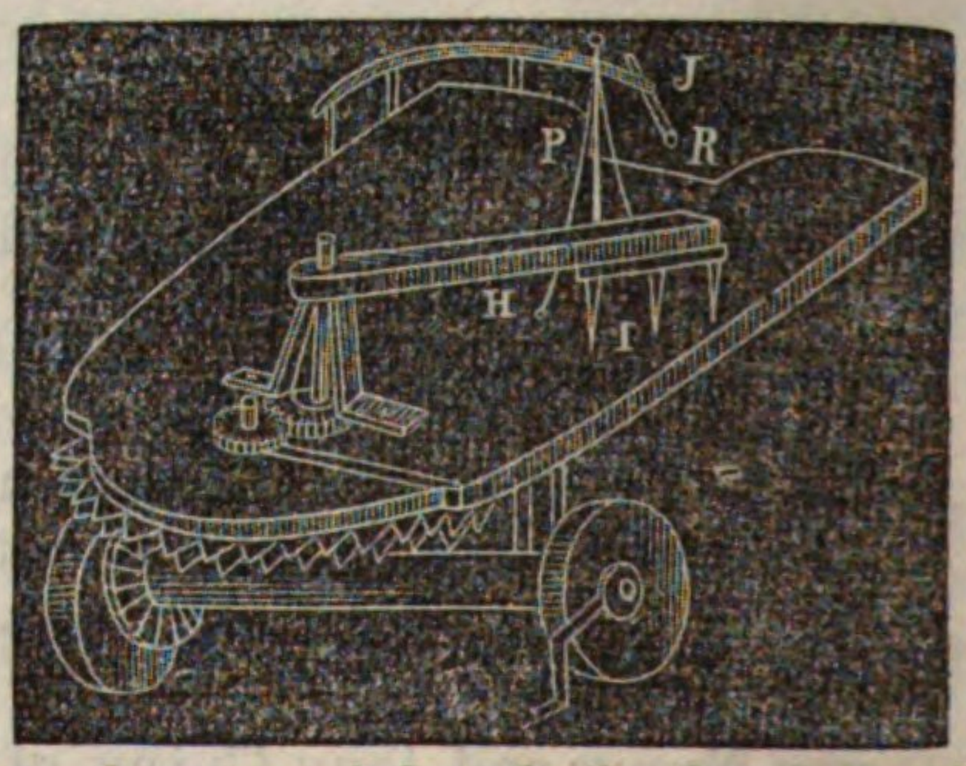
This machine is constructed of a clamp, a strong bar made of two plates, a frame or carriage, a vice operated by a series of springs, a series of pulleys and levers, arranged and applied in the covering of hammer heads of piano-fortes. The covering consists of three thicknesses of felt for the base, gradually tapering to two towards the middle, and continuing double to the end. The covering is made to adhere by means of glue. The inventor claims the application of felt or other covering material, to the whole set of hammer heads, at one operation. Also the clamp A (see fig.)

the bar K, levers, pulleys and block B, with the sliding frame P in combination. Also the vice in combination with and inclosing the bar K and block B; the lip pieces in combination with said vice; and the method of varying the pressure of the levers upon the vice by means of a movable bridge X, in combination with a press X, and Y. Also the levers and springs in combination with the vice.

No. 9,527.—WALTER HUNT, of New York, N. Y., Assignor to CHARLES S. KIPP, of New York aforesaid.—*Improvement in Decanter Stoppers.*—Patented January 4th, 1853.

This improvement is denominated by the inventor the "Swivel-Cap Decanter Stopper," and is composed of two parts or species; a tube combining in one piece two flanges C, and a funnel shaped cap F, with a shaft E, upon which said cap is suspended: "I claim the combination of the circular cap and the central shaft upon which the cap is suspended, allowing it to have three principal motions, viz. the swivel, pendulous, and sliding motions."

No. 9,528.—THOMAS BAYLIS and DANIEL WILLIAMS, of Tecumseh, Mich.—*Improvement in the method of cutting and raking grain and cutting grass.*—Patented January 11th, 1853.



This machine consists of two large wheels which run upon the ground (and carry the whole machine), an axle, and a platform, circular in front, under which is a revolving circular knife or sickle; said knife is made to revolve under the platform by means of a wheel attached to the hub of the driving wheel, which runs upon the ground, and mashes into a wheel attached to the lower portion of an upright shaft, the top of which shaft projects up through the platform, and is also the axle of the circular cutter or knife. To this last mentioned shaft or axle is attached a wheel above the platform, which mashes into another wheel also above the platform, causing a rake I, to revolve at the end of an arm H, which gathers the grain into a sheaf, and discharges it at the rear of the platform at R. There are teeth projecting in front of the platform under the cutter, which extend into the grain or grass, somewhat beyond the teeth of the cutter.

The inventors claim, "that by the application of continuous rotary motion the force once acquired, is not lost as in other methods, in which the motion of the cutter is alternately checked and reversed. That the circular wheel to which the knives are attached, becomes an efficient balance wheel. Also that the form and action of the

machine renders feasible the gathering of the cut grain by a circular sweep of the rake, and the size of the sheaf is regulated. That it is cheaper of construction, more portable, and less liable to get out of repair than other machines for a similar purpose."

No. 9,529.—NATHAN CHAPIN, of New York, N. Y.—*Improvement in a machine for "Duplicate Turning of Profile Work, &c."*—Patented January 11th, 1853.

The nature of this invention consists in constructing a machine, in which profile work may be executed upon both or one edge of pieces of wood or other material, by securing any desired number in a pair of discs forming a drum or cylinder turning on an axis, which being driven by proper machinery, said pieces may be worked to conform to a pattern by an improved swing rest for the gouge, working against the edge of said pattern, while the inside face or edge is worked at the same time by a swing rest carrying a gouge, which is made to advance or recede agreeably to the edge of the pattern upon the outside of the cylinder, by means of a rod passing along a groove in the axis communicating motion to the cutter and rest.

"What I claim is, constructing the clamping heads, with a projection on the interior face, in combination with orifices cut through said clamps and projection, for the purpose of introducing key slats, to retain the pieces during the operation of turning the interior and exterior surfaces. Also, giving to the sliding and vibrating interior cutter motion corresponding to the pattern."

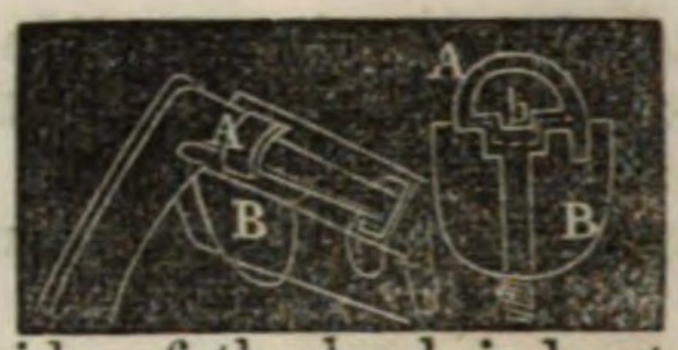
No. 9,530.—MOSES G. FARMER, of Salem, Mass.—*Improvement in "Porous Cells for Galvanic Batteries."*—Patented January 11th, 1853.

This improvement consists in the method of constructing a vessel to contain the acids used in the operation of *Galvanic Batteries*. These vessels are usually constructed of unglazed earthen or porcelain, or some suitable substance that is porous, so as to allow of the passage through it of the nitric acid or liquid; and in consequence of making the whole vessel porous, so that the electricity can pass through any part of it, a great waste of the liquid necessarily follows; and it attacks the mercury of the amalgamated zinc in the cistern, producing serious injury. This vessel is porous only a part of it, the remainder being impervious to the liquid by being glazed, and the electricity can pass through the unglazed or porous part, and is so arranged as to obviate the loss and injury above referred to; and more power is obtained.

"I claim the improved cell with a part only of it porous, the other part being made by glazing or other means impervious to the passage of electricity or acids or liquid."

No. 9,531.—PINCKNEY FROST, of Springfield, Vt.—*Improved Mode of Fastening Scythes to the Snath.*—Patented January 11th, 1853.

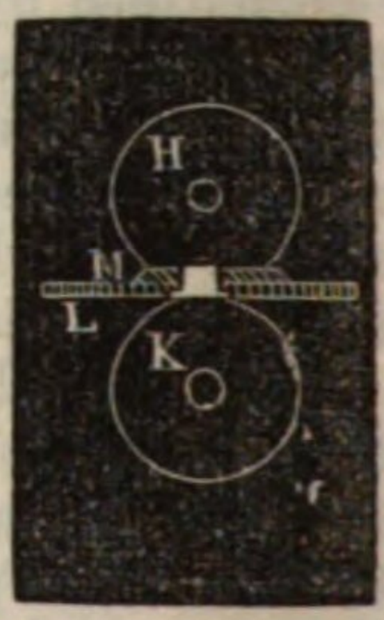
This improvement consists in the peculiar construction of a set



ring B, which has a groove for the passage of the claw of the scythe, and a mortice for the admission of the loop-bolt. The loop-bolt has an opening or loop A, and the groove with a hook or lip which fills the opening in the set ring, on the side of the snath; the inside of the hook is bent firmly against the wood.

Claim.—"The peculiar construction of the loop and the set ring, with the grooves."

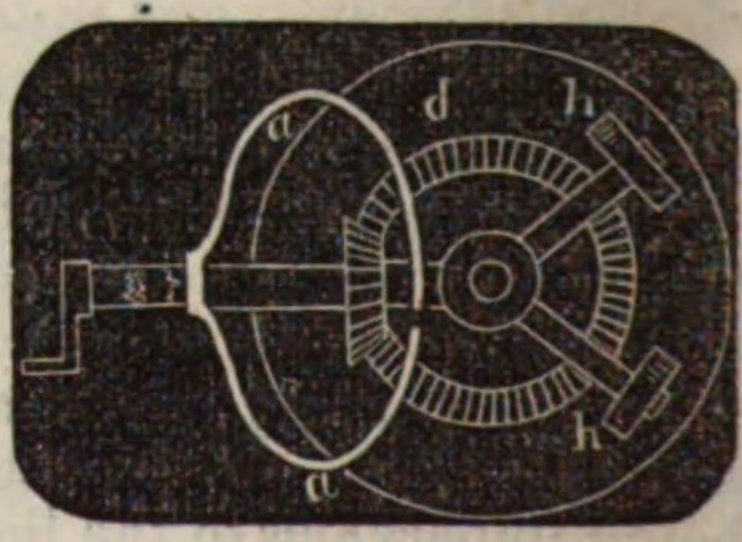
No. 9,532.—AMMI M. GEORGE, of Nashua, N. H.—*Improved Method of Hanging and Operating Circular Saws.*—Patented January 11th, 1853.



This invention consists in supporting and guiding a circular saw L, which is driven by friction applied near its periphery by means of a guard plate, M upon which is placed an arbor fitting a circular opening in the centre of the saw plate, and around which the saw runs, by which means boards or veneers may be sawed off almost equal with the diameter of the saw; H H, K K, are the friction wheels, seen in the figure.

Claim.—"In combination with a circular saw driven by friction near its periphery; the guard plate with its arbor, around which the saw runs, and by which it is held into the wood, and on which the board or veneer being sawed may rest, and relieve the saw from all friction."

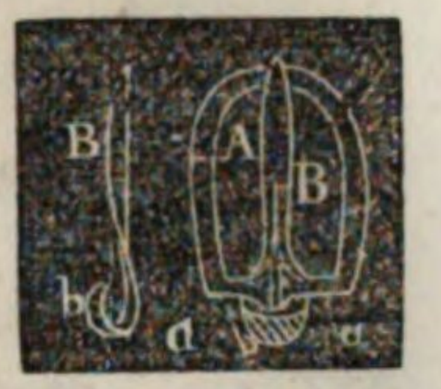
No. 9,533.—JOHN L. GILLILAND, of Brooklyn, N. Y.—*Improvement in Fire-polishing Glass.*—Patented January 11th, 1853.



The method usually pursued in the fire-polishing of glass consists in attaching the article to be polished by means of a piece of glass to the end of the ordinary punta-iron, inserting it in the fire and turning it around. The object of this invention is to obviate the necessity of injuring the surface of the article by attaching it as formerly to the ordinary punta iron. It consists in the use of a horizontal table D (see fig.), on the end of a hollow handle A, through which an arbor or shaft passes, by which rotary motion is communicated to the vertical arbor of the table by gearing (*g* is the crank); by means of which a glass lens or other article can be rotated in the furnace by the workmen, so as to receive the heat equally all over its surface without injury from the ordinary mode of attachment.

Claim.—"The method of fire-polishing glass, by means of a rotating table provided with a hollow handle, or its equivalent, and gear, by means of which the table can be rotated."

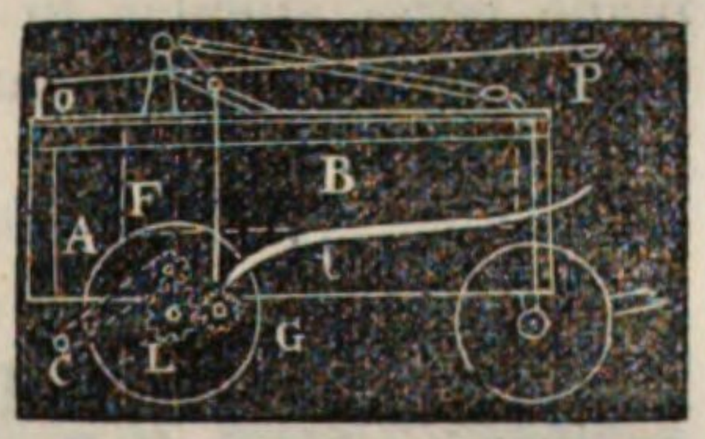
No. 9,534.—Peter P. R. Hayden, of New York, N. Y.—*Improvement in Buckles.*—Patented January 11th, 1853.



This improvement consists in the manner of connecting the two ends of the buckle, or wire of which the buckle is constructed, by means of a boss *a*, formed at each of the ends of the body A, of the buckle, the bosses being in contact with each other, and forming a bulb around which one end *b*, of the tongue B, is clasped. The end of the tongue which surrounds the bulb to prevent the tongue from slipping off of the bulb and to keep it in its proper place.

Claim.—Uniting the two ends of the body of the buckle by means of a boss formed at each of the two ends of the body, the bosses being in contact, and forming a bulb, around which one end of the tongue (having a recess or groove fitting to the bulb) is clasped.

No. 9,535.—Silas A. Hedges, of Lancaster, Ohio.—*Improvement in Carts for Spreading Manures.*—Patented January 11th, 1853.



This improvement consists in constructing a cart with two bodies, the front one of which is capable of being raised so as to discharge the manure into the rear one, by means of throwing a shaft (which is connected with the front end of it by a tackle) into gear with the hind axle at L; and in providing an inclined endless apron C, in the rear body A, which is also actuated by the hind axle, and so arranged with the tail-board that by means of a lever P, it is thrown into gear simultaneously with the raising of the tail-board O.

Claim.—The construction of a cart with two bodies, the front one of which is raised or tilted for the discharge of its contents into the rear one, by the action of the hind axle by means of an axle (to which the halyard is attached, having at one end a ratchet wheel) and tackle, when thrown into gear by means of a hand lever. Also the combination of the endless apron, the tilting body, and raising the tail-board simultaneously, with throwing in gear the endless slotted apron.

No. 9,536.—William Mann, of Philadelphia, Pa.—*Improvement in the Manufacture of Copying Paper.*—Patented January 11th, 1853.

This invention or improvement consists in making a paper upon which writing with copying ink upon common paper, by pressure, will make a clear and distinct impression or copy. Manilla and cotton are to be used (instead of the materials hitherto employed in the manufacture of bibulous paper for copying) in equal portions.

Claim.—The copying paper composed of manilla fibre or the equivalent thereof, tempered with cotton or its equivalent.

No. 9,537.—ANDREW MAYER, of Philadelphia, Pa.—*Improvement in Apparatus for cutting Screws on Pipes and other articles.*—Patented January 11th, 1853.

The object of this invention is to cut screws upon the ends of pipes or tubes without injuring the dies by twisting; and is attained by having the dies which cut the screws loose laterally between the plates which confine them, but not loose as respects the distance between the two plates which secure the dies. The reason for allowing this movement is to enable the dies to accommodate themselves (as the pipe or other article is turned to screw it) to any bends or irregularities which may occur in it. The lathe is so constructed as to admit of adjustment, and allow different lengths of pipe to be conducted to the dies.

Claim.—Arranging solid dies between the side plates of a stock, in such a manner that they are free to play to a limited distance in a plane perpendicular to the axis of the bolt or pipe to be screwed, while they are at the same time incapable of revolution in the same plane.

No. 9,538.—RICHARD MONTGOMERY, of New York, N. Y.—*Improvement in Steam Boilers.*—Patented January 11th, 1853.

This improvement consists in the method of constructing certain parts of steam boilers, and connecting the series of flues and water spaces with the roof of the fire-box; also connecting them at their opposite extremities with the smoke-box or the up-take. To accomplish this object, the rear margin of the fire-box is to be slit at right angles to its edge, so as to form a series of tongues which correspond in width with the adjacent water spaces and flues. The tongues, corresponding in width with the water spaces, are bent at right angles to the plane of the roof so as to extend downwards a short distance against the ends of the water spaces; the other alternate tongues are not bent, but project under the tops of the flues, which tops are formed from the sides overlapping. The whole is then secured by rivets.

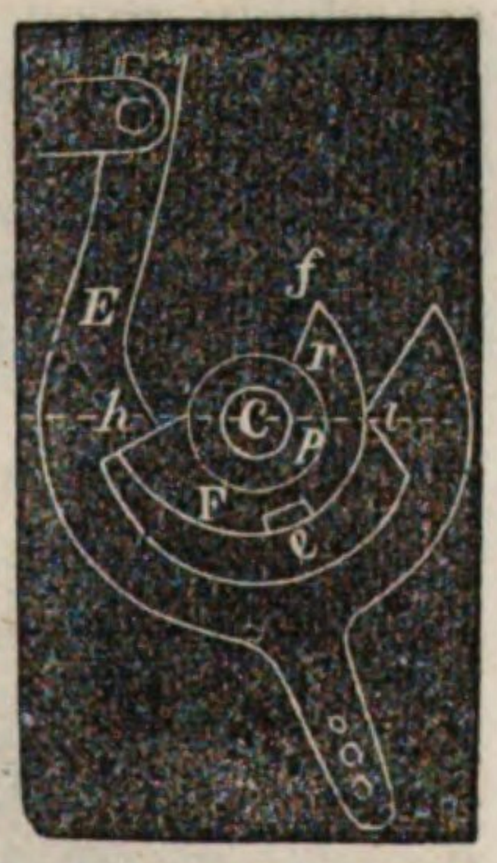
Claim.—Riveting together the overtopping flanges of the opposite sides of sheet flues in steam boilers, whereby the flues are firmly attached each to each. Also the method of connecting a series of flues and water spaces with the roof or arch of the fire-box, by means of tongues which project from the latter, and are secured alternately to the faces of the water spaces and to the tops of the flues.

No. 9,539.—Dan Pease, Jr., of Floyd, N. Y.—*Improvement in the Smut Machine.*—Patented January 11th, 1853.

This improvement consists in construction of a receiver of the grain, as it comes with great velocity from the scouring cylinder A (see fig.). As the grain comes into the receiver it strikes upon a deflector P, and against a plane surface of the receiver; which causes it to fly in all directions, until its upward inclination is arrested by an adjustable top, and its downward inclination is arrested by an inclined ribbed bottom, which prevents the further spreading of the grain, and also gives it in an even state of distribution a downward direction towards the discharge head of the scouring cylinder, in which state of distribution it is kept until it passes through the wind-pipe and passes from the machine.

Claim.—The employment of the adjustable deflector (set at an angle to throw the grain in different directions) in combination with the receiver with an adjustable top, and the front piece set in a particular position in relation to the deflector. Also causing the grain to spread by making the top of the receiver adjustable to different heights.

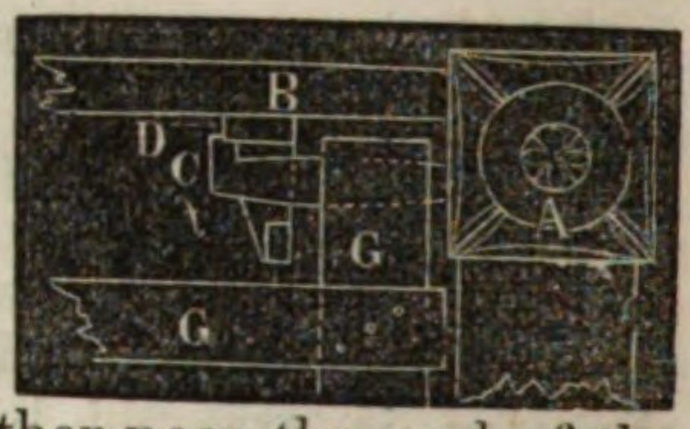
No. 9,540.—Robert W. Andrews, of Stafford, Conn.—*Improvement in Power Looms.*—Patented January 18th, 1853.



The nature of this invention consists in operating each treadle, E (see fig.), by means of a mover F, having two outwardly acting cam surfaces, i, r, of unequal length, combined in one piece, in such a manner, that the position of the mover upon its arbor can be reversed, for the purpose of doubling its capacity for producing different movements and retentions of the treadles. Each treadle is curved so as to embrace its mover, and has on its inner periphery of its curved portion two projections, whose central points are located on opposite sides of, and in the same line with, the centre of the cam-shaft, and against which the cam surfaces of the mover act, in vibrating the treadle. Each mover has a central hub of the required thickness, and two cam plates outside of the same, each being of one-half of the thickness of the hub, and both firmly united. The outer peripheries of the plates are of the same radius, and respectively act against the shoes of the treadle.

Claim.—Operating each treadle by means of a mover having two outwardly acting cam surfaces of unequal length combined in one piece, and producing the movements and retentions. Also the form and arrangement respectively of the treadles and their movers; that the treadles can be reversed in their positions upon their fulcrums, causing a reversal of the movements and retentions of the treadles.

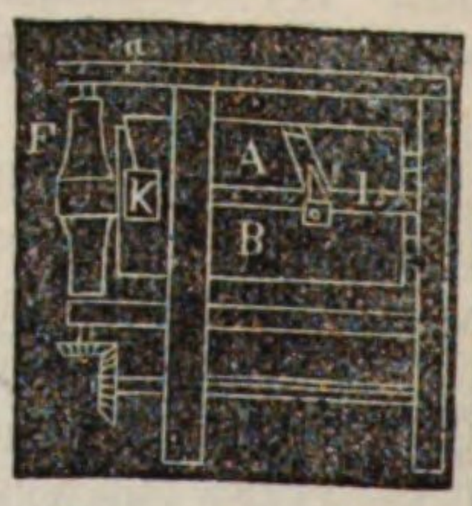
No. 9,541.—Charles S. Bauder, of Cleveland, Ohio.—*Improvement in Fastenings for Bedsteads.*—Patented January 18th, 1853.

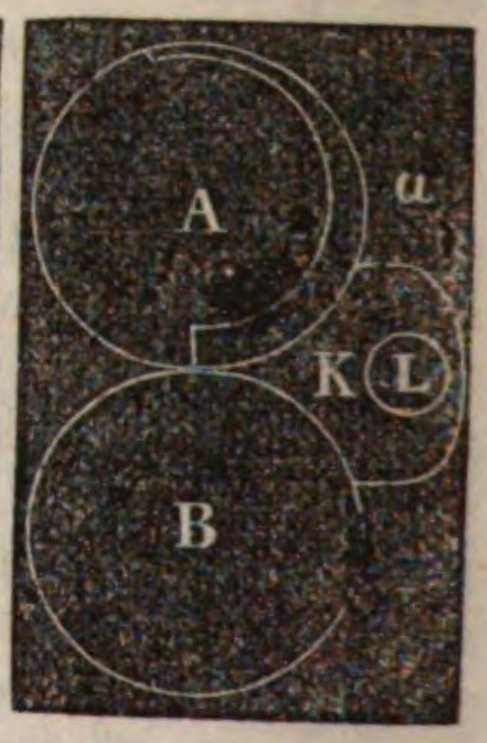


This invention consists of the method of connecting (see fig.) the side rails and posts of bedsteads, by fastenings composed of metal bars, with projections on each end, the inner faces of which are sections of screws; these faces work against metal inclined planes, one of which is fastened in the post A, and the other near the end of the rail B; the joint being kept tight by the weight of the bed, which rests on a frame, G, which frame rests upon the iron bars or fastenings, thus forming a self-tightening fastening.

Claim.—The fastening of bedsteads by the use of metal bars, having upon their extremities arms with inner faces formed of sections of screws, which arms work against the faces of castings secured in the bed posts and the ends of the rails—the face of the castings being likewise constructed of sections of screws.

No. 9,542.—Dexter H. Chamberlain, of Boston, Mass.—*Improvement in machinery for reducing metallic bars into the shape of nails or other articles of like character.*—Patented January 18th, 1853.





This machine consists of two horizontal rollers applied (see figs.) respectively upon the ends of two parallel shafts, that are supported, in suitable bearings, by a frame. The end of one of these rollers A, has a grooved cavity, a, formed in it, and on its periphery; the cavity being wider at one end than the other. Against the cavity and the ends of the two rollers A B, a third roller, F, is arranged upon a vertical shaft, the periphery of which roller rests and rotates against the ends of the two rollers. In connexion with the two rollers so applied, is a bolster K, which consists of a block of metal curved to fit into the angularly shaped space between the peripheries of the two first mentioned rollers. This block of metal is fixed upon one end of a slide L, running parallel with the horizontal shafts (to which the two rollers are applied), so as to have a free endwise movement. From this slide an arm is made to project into a cam groove, cut around in the shaft (to which is applied one of the rollers) in such a manner as to keep the front end of the bolster on a plane with the reducing edge of the cavity during the rotary movement of the cavity against it. By means of gearings the three rollers are caused to move or rotate at the same time, with the same velocity.

Claim.—The combination of the bolster with the three rollers, as arranged and made to operate together. The bolster preventing the

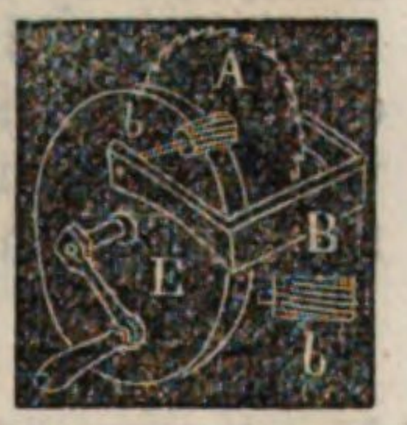
metal from splaying out, or squeezing between the rollers so as to form a fin.

No. 9,543.—Joseph Contner, of Milroy, Pa.—*Improvement in the Bridge Spring-Seat Saddle.*—Patented January 18th, 1853.

This improvement consists of a semi-oval upright steel or iron plate, fastened with its convex end up, by screws through its legs, to the under and inner part of the pommel; so that the hook on the front end of the centre spring may be fastened to it, to give additional spring. (See figure.)

Claim.—Connecting the bridge spring-seat D, to the pommel of the saddle, A, by hooking or fastening the hook on the front end of the longitudinal centre spring C, of the bridge spring-seat to the semi-oval or circular steel or iron plate or strap J, fastened underneath the pommel by screws or otherwise, through its legs, to the legs of the pommel, to give additional spring to the seat, and allow the seat to be disconnected from the frame when necessary, and also strengthen the pommel.

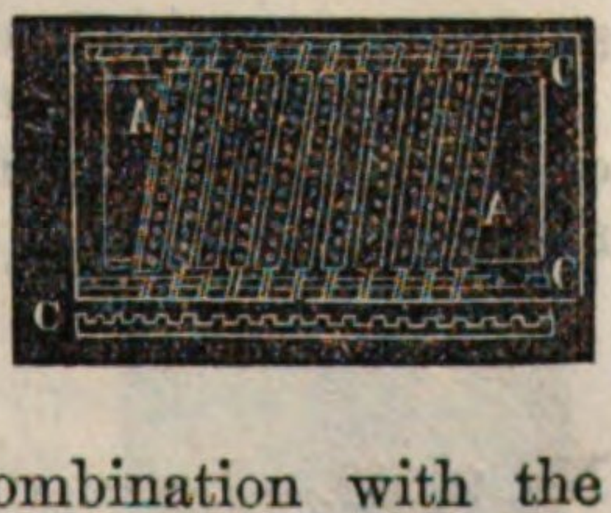
No. 9,544.—George Cook & David Cook, of New Haven, Conn.—*Improvement in "Working Circular Saws, &c."*—Patented January 18th, 1853.



This improvement consists of a hooked tooth pinion: the hooked teeth or leaves of the pinion *b*, mash into the rubber covering of the wheel E, to which the power is applied, and cause, when in operation, the rubber to fill the hollows of the teeth by reason of its elasticity.

Claim.—The curved or hooked tooth pinion, acting in the manner and for the purposes herein set forth.

No. 9,545.—Edward Everett, of Lawrence, and Thomas T. Thomas, of Lowell, Mass.—*Improvement in Hole-boards for Jacquard Looms.*—Patented January 18th, 1853.



This invention is designed to facilitate the operation of changing the relative position of the mail-cords or heddles in a jacquard loom when the number of threads in a given breadth of the cloth is to be increased or diminished. This improvement is confined to that part of the loom commonly called the hole-board A A.

Claim.—The sectional harness-board in combination with the movable supporting bars placed on each side of the frame, for the purpose of adjusting and retaining the harness-boards in the position required.

No. 9,546.—James S. Hogeland, of Lafayette, Ind.—*Improvement in Wool Condensers.*—Patented January 18th, 1853.

This improvement consists in applying to the delivery side of the ordinary "rub-rollers" of wool condensers "relief and guide rollers," which are so situated on the delivery side of the rub-rollers, as to relieve the slubbing from its tendency to adhere to the latter, and be carried out of the direct line of the spools.

Claim.—The method of detaching the ropings from the rub-roller, and guiding them on their passage to the spools, in such manner as to prevent them from being unequally deflected, and thereby unequally stretched, by means of a relief and guide roller.

No. 9,547.—John Griffiths, of Philadelphia, Pa.—*Improvement in Screw-cutting Machines.*—Patented January 18th, 1853.

This machine consists of a turned shaft, grooved longitudinally, and contained in a hollow mandrel, and made to revolve with the mandrel. The shaft is distinct from the hollow mandrel, in which it slides with ease. To the outer extremity of the shaft a screw collar is keyed, which revolves in two semicircular screw plates: the upper screw plate is keyed to a cap, and the lower to a bed; and both move upon a common joint. A cylindrical die having the same pitch as the screw collar is keyed to the extremity of the shaft. The cap and bed are made to approximate by means of an "elliptical piece," which is moved by a lever: the screw collar and plates are adjustable.

Claim.—The circular die with an offset which makes a cutting edge, which is held in position by a bolt and screw nut; the threads which are cut in its periphery being parallel, instead of having a running pitch.

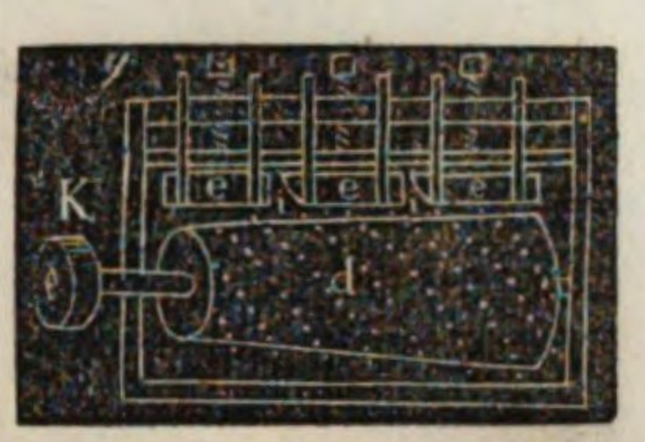
No. 9,548.—John L. Kingsley, of New York, N. Y.—*Improvement in Metallic Gum Composition.*—Patented January 18th, 1853.

The nature of this invention consists in the process of preparing and using compositions made by grinding metals, earths, and other similar materials, with the raw or uncured gums of gutta percha and caoutchouc (India rubber). The composition to be used in making stereotype moulds and plates, &c.

Claim.—The making of stereotype moulds and plates of the raw or uncured gum combined with the pulverized oxides of iron and antimony, or their equivalents.

No. 9,549.—Jeremiah P. Smith, of Hummelstown, Pa.—*Improvement in Corn Shellers.*—Patented January 18th, 1853.

The shelling bars are made in separate pieces *e e e* (see fig.), and this improvement consists in constructing the second and third bar



with a bevel on the feeding end, to facilitate the discharge of the cobs. The straps are to prevent the shelling bars *e e e*, from coming in contact with the cylinder *d*. There are also springs which press the bars in such a manner as to shell either thick or thin ears. The screws are to regulate the spring.

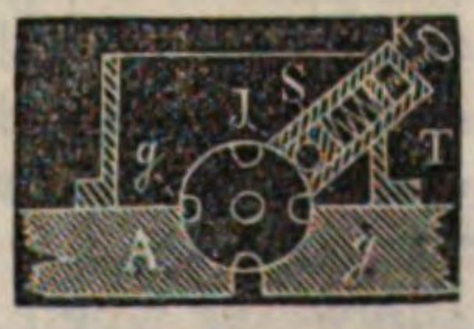
Claim.—The bevelled spring-blocks or shelling-bars at *i i* in separate pieces, in the manner and for the purposes set forth.

No. 9,550.—Joseph W. Webb, of Aurora, N. Y.—*Improvement in Rotary Steam or Power Engines.*—Patented January 18th, 1853.

This invention consists principally in so constructing, arranging, and operating the steam-chest valves, exhaust chamber, and slides, with reference to each other, and with reference to the ports and cylinders, that steam may be made to operate *expansively* in the cylinders in a more convenient, effective, and economical manner than has hitherto. To accomplish this object a double engine is constructed, having two annular cylinders connected firmly to each other and stationary, but which do not communicate with each other. Each has its ports, strap, and piston, but so arranged that when the steam is exhausting from one cylinder it shall be operating with its greatest power upon the piston of the other, and *vice versâ*. Both cylinders receive steam from the same chest, but through different ports, governed by separate valves; and both exhaust into the same chamber, each through its own valve, and through an aperture in the top of the steam chamber, governed by slides, which are stationary when the engine is in operation, but shifted for reversing at the pleasure of the engineer.

Claim.—Making two exhaust openings, separate and distinct from each other, through each steam and cut-off valve; the valves having seats on the upper as well as lower side of the steam chamber, each of said exhaust openings communicating with the exhaust chamber, through apertures in the upper side of the steam chamber, which are opened and closed at pleasure by slides used in connexion with the valves for governing or reversing the engine.

No. 9,551.—Samuel Witherow, of Gettysburg, Pa.—*Improvement in a Corn Planter.*—Patented January 18th, 1853.



The nature of this invention consists in so arranging the spring-gauge slide as to prevent the breaking of the grains, when received into the cells of the revolving seeding cylinder edgewise, and so that the spring be adjusted to any required pressure, whether the hopper be full or otherwise. And the manner of adjusting the seeding tube, and supporting the drag-bar, to which it is attached, by passing the same through a slot in the neck of the mould-board.

To remedy the practical difficulty above referred to, in the drills heretofore in use, the inventor has constructed a box *g*, in the fore part of the seed-box, at suitable angles reaching down to the cylinder A; at the end of the tube is a roller, J, the bearing of which rests on the block, S. The spring T presses upon the block S, and consequently upon the roller, and that upon the grain. When the roller comes in contact with the grain, the spring allows the roller to rise, and the grain passes down into the furrow; the roller closes down again without injury to the grain.

Claim.—The spring T, slide S, and roller J, within a box or tube forming one end of the hopper, in such manner as to prevent any more seed from leaving the hopper than is required for planting. Also the arrangement of the drag bar under the plow beam, and passing through the adjustable hanger, and a slit in the neck of the mould-board, for the purpose of giving additional lateral support to it, and protecting it from the earth which runs up on the mould-board in turning the furrows.

No. 9,552.—JOHN BELL, of New York, N. Y.—*Improvement in the Mode of Joining the Corners of Boxes, &c.*—Patented January 25th, 1853.

The nature of this invention consists in forming a joint, compounded of a double oblique tenon and corresponding mortises, at the corners of drawers, boxes, &c., as seen in the figure. The corners are prevented from coming apart when the lid or bottom is fastened on, thereby being secured in a manner superior to modes heretofore known. The lines of the tenons are parallel to each other, but drawn from both sides of a vertical line at the corner of the box, at an obtuse angle with the vertical line above the vertex of the angle.

Claim.—Joining the corners of boxes, &c., by means of double oblique mortises and tenons (which are parallel), so that neither the sides nor ends can be separated or displaced without previous removal of the top and bottom of the box.

No. 9,553.—JAMES BLACK and ORSON BEECHER, of Philadelphia, Pa.—*Improvement in the Hydraulic Steam Pump.*—Patented January 25th, 1853.

This invention consists in connecting the top of the condenser with the valve box, between the induction and eduction valves, by a pipe with a check valve so arranged as to draw the air, &c., from the condenser. When the water is drawn down in said pipe by the diaphragm, the vessel is filled with water, and the air is driven out of said pipe through another check valve into the discharge pipe or elsewhere, by the water when it is forced up in said pipe as it is expelled from the vessel by the steam above the diaphragm, and thus the air is drawn from the condenser by a column of water, working the equivalent of an air-pump. Also in the arrangement of a pipe with a valve in it

leading from the bottom of the condenser to the chamber of the pump, so constructed and arranged as to draw the water from the condenser, into the chamber of the pump, by the action of the diaphragm or its equivalent, thus causing the water pump to work an exhaust-pump or *its* equivalent to the condenser, at the same time that it does its ordinary work.

Claim.—The pipes and valves, or their equivalents, so constructed and arranged as to draw the air, &c., from the condenser, and drive it into the discharge pipe or elsewhere, by the column of water in said pipe, operating by the working of the diaphragm, which causes said column of water to work the equivalent of an air-pump to the condenser. Also the pipe and valve or their equivalents, so constructed and arranged as to draw the water from the condenser by the raising of the diaphragm, thus causing the water pump to work an exhaust-pump or its equivalent to the condenser, at the same time that it does its ordinary work.

No. 9,554.—Charles Bourgard, of New York, N. Y.—*Machine for manufacturing Wigs.*—Patented January 25th, 1853.

The machine which constitutes this invention consists of a work-frame and its carriage, one or more needles, and the mechanism through which the work-table, carriage, and needle or needles, receive such motions in relation to each other as are necessary for the proper performance of the operation. The carriage is mounted on wheels which run on a suitable railway, and the work-frame is placed upon a double slide-frame, which rests on the carriage, and is adjustable longitudinally and transversely.

The work-frame is provided with means of securing the silk or other material into which the hair is to be inserted, and confining a suitable quantity of hair, which is laid on the face of the silk or other material. The needle is barbed and receives a reciprocating motion in a line perpendicular to the face of the silk, and passes through it from its back side catching one or more hairs as may be required, and drawing the root ends through the back of the silk or material. The carriage receives an intermittent rectilinear motion, which takes place between every two passages of the needle through the silk, so as to bring the silk or material to a proper position for the drawing through of the succeeding hair; by this motion the hair is inserted in rows.

The relative position of the hairs of each row is regulated by the double slide of the frame.

Claim.—"(For the purpose of making the partings or those parts of wigs and all articles of a similar nature where the artificial scalp or skin is visible and the surrounding parts) the employment of two or more adjustable slide-frames, for carrying the silk or other material into which the hair is to be inserted, and the hair to be inserted therein, in combination with a reciprocating hooked or barbed needle, either the frames or needle having such a movement as is necessary to insert the hairs at a proper distance apart."

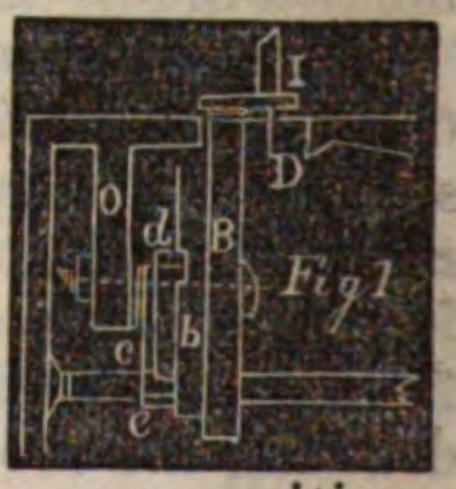
No. 9,555.—Henry Britney, of Springfield, Ohio.—*Improvement in Tanning Leather.*—Patented January 25th, 1853.

This invention consists of a tin vat (see fig.) in which is placed an upright shaft (which may be turned by horse or other power) with a series of arms projecting from it horizontally, about four inches apart. The hides are secured by one edge to the arms; and when the hides are attached, the vat is filled with liquor. When the shaft is put in motion the hides arrange themselves horizontally and parallel to each other, and the liquor can circulate freely among them, and cause them to be uniformly tanned.

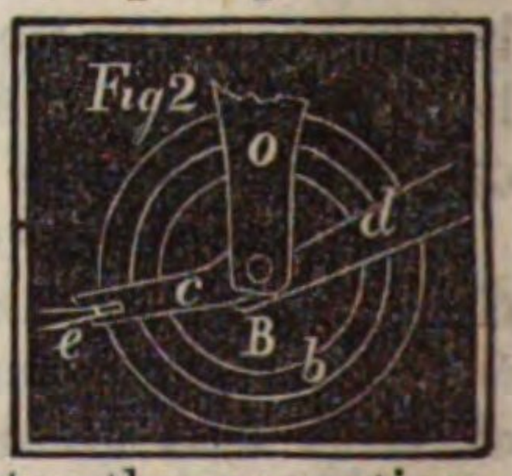
The object of this invention is to expose the entire surfaces of the hides to the liquor simultaneously.

Claim.—Continuously towing the hides in separated layers through the tanning liquor, in such manner, that each hide made fast only at one edge or end to the towing mechanism, will be gently stretched and kept spread out by the resistance of the liquor, which is caused freely to circulate in contact with both sides of the hides, whereby every hide, of a quantity however large, is equally and constantly exposed to the action of the tanning liquor, and the stretching action upon the hides is adjusted.

No. 9,556.—Freeman Palmer, of Conneaut, Ohio.—*Improvement in Sewing Machine.*—Patented January 25th, 1853.



The inventor's improvement is in the feeding apparatus for shuttle sewing machines. Fig. 1 is a side view, showing the feeding-wheel B, with a flange *b*, upon its disk, and the cramp *d*, which grasps the flange *b*, but sliding freely along the same until acted on by the lever *c*, when it instantly binds firmly upon the flange, so that the feed wheel shall be carried forward by the arm *e*; the cramp *d* is kept in its place by a spring: Fig. 2 is a front view, showing these parts in their proper position. The forward motion of the feed wheel, which gives the length of the stitch, is regulated at pleasure by a screw regulator, which allows the arm a longer or a shorter range. In the returning motion of the shuttle, one of the friction rollers strikes an arm placed on the end of a horizontal shaft, and acts on the feed wheel B, carrying the material to be sewed far enough forward for another stitch, which completes the operation.



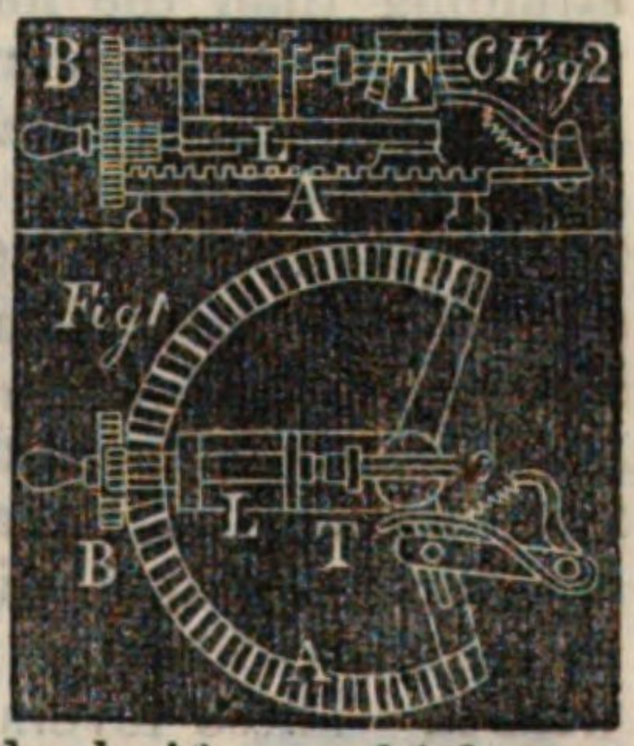
Claim.—The arrangement and combination of parts, by which the material to be sewed is carried under the needle, in a way to secure any required length of stitch; consisting of the shaft C, and the screw regulator Y, together with the lever and cramp *c* and *d*, upon the feed wheel B.

No. 9,557.—Samuel M. Perkins, of Springfield, Pa.—*Improvement in manufacturing Coats, &c.*—Patented January 25th, 1853.

The nature of this invention consists in forming the bat as it comes from the carding machine, on suitable "rollers" or "formers." The bat, as it comes from the machine, is formed into a coat or other wearing articles, by tearing out portions of it for the arm-holes; the arm pieces are torn diagonally across the middle of the bat to have the natural downward inclination of the fibre-like cloth. The arm-pieces and collar are tacked to the body of the coat by a few loose stitches: and the coat is then "shrunk" by a kind of felting process, and shaped, and dried over a block, when it is ready for trimming.

Claim.—The art or method of making seamless felt articles of use, and wearing apparel, by giving the batting of wool or fur the desired shape, and uniting its edges when required, with silk or any other non-shrinking equivalent, or by such shrinking threads or fibre as will resume their original state when dry.

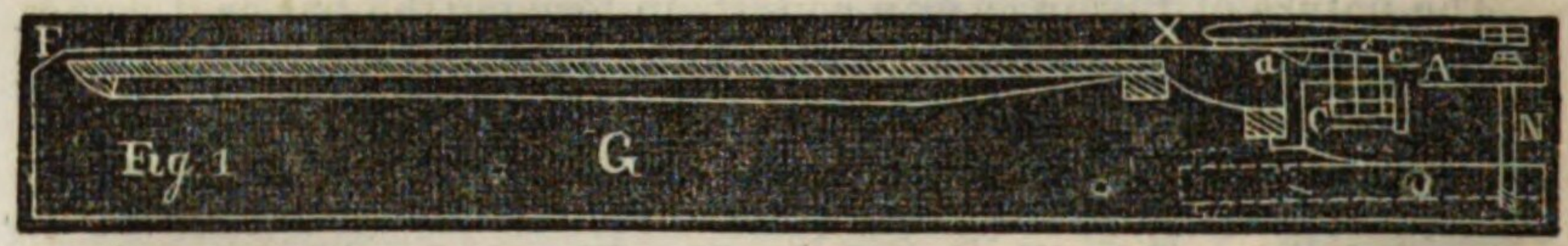
No. 9,558.—William H. Lazelle, of New York, N. Y.—*Improvements in Apple-Paring Machines.*—Patented January 25th, 1853.



This invention consists of a semicircular stationary rack in combination with a traversing lever or handle, on which are mounted a wheel and pinion, and supports, sustaining a revolving fork, having a pinion on the end of its handle, mashing with the wheel on the lever; the prongs of the fork sustain the apple against a stationary, yet yielding knife T (see figs.), fastened to an arm, by which when the traversing lever L is pushed horizontally backward and forward, a rotary motion is given to the fork, thus making the apple rotate against the knife T, which acts upon it to pare or remove the skin in a perfect manner. When the apple is placed on the prongs of the fork, and the handle of the lever is drawn to the end of the rack A, by pushing the lever forward in a horizontal direction, the prongs of the fork will traverse a semicircle, and the knife will act longitudinally from the heel to the toe of the fork, or from the stem to the blossom end of the apple. The stationary spring knife, being made adjustable and flexible, is efficient and accommodating to the different shapes of the fruit.

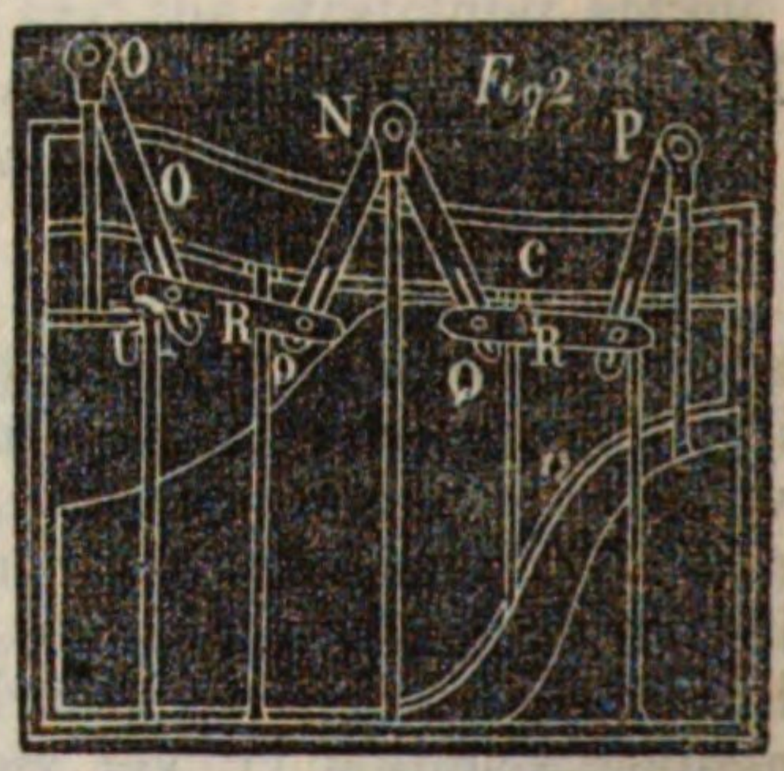
Claim.—The apple-paring machine constructed with a stationary circular rack or way A, in combination with a traversing lever L, for operating the fork *c*, on which the apple or other article is placed, the handle having a pinion on it, which traverses the rack, and gives rotary motion to the fork, making the apple revolve against the swinging spring knife T, while the handle is pushed forward and backward in a horizontal direction by the operator.

No. 9,559.—J. PIFFAUT, of New Orleans, La.—*Improvement in Pianofortes.*—Patented January 25th, 1853.



This invention consists in so constructing the metallic frames of Pianofortes, that the inside frame, or that which supports the long bridge of the piano, may be raised or lowered at pleasure, and thus raise or lower the tone of the instrument, and at the same time keep up the general accord of the piano.

The frame to be made of iron or other metal. The movable or adjustable part A (see figs.), which supports what is termed the straight or long bridge, is connected to the frame. By turning the screw N, the rear end of part A will be drawn down, while the front which carries the bridge *a*, will rise: and the tone of the piano is raised or lowered by a reversed operation.



To raise or lower the tone of an instrument, and still preserve its accord, the coarser strings will require more straining than the finer ones. The operation is a constantly varying one, which no non-adjustable apparatus can provide for. For this purpose the inventor arranges besides the centre screw N (see fig. 2), one on each side of it and near the ends of the frame O P, which are similarly connected to the main frame in all respects as that at N. These screws are each provided with curved levers N, O, P, to which they are permanently fixed, so that by the turning of one, the other will move with it. These levers are connected together by connecting bars R, R, which are attached by screw bolts passing through slots in the levers, in which they are made adjustable, so as to make the coarser strings, when the tone of the instrument is to be raised, undergo a greater degree of tension than the finer ones; which may be done by increasing the length of the lever by means of its slot (and vice versâ), and thus preserve the accord. By turning the screw N, motion is given through the levers and contracting bars to the screws O, P; and consequently all three act simultaneously, and in that degree for which they may be set. There is a dial or indicator, upon which a hand on the screw P, marks the degree to which the instrument is raised or lowered. C represents pieces of wood with which the metallic movable part A, may be filled so as to better hold the pins *c c c*, which extend into them. F (fig. 1) represents the crooked bridge. The number of ribs may be increased or diminished, or so arranged as best to support or counteract the strain upon the wires. The movable part A has two motions independent of the frame;

horizontal, so that whilst the bridges cannot approach each other nearer than a given point, they may recede one from the other; the other motion is in the arc of a circle upward for straining up the wires.

Claim.—In combination with the metallic frame of a piano-forte, the movable part which supports the bridge, and which is raised or lowered at pleasure, by means of a key operating through the screws and levers, or their equivalents, for the purpose of raising or lowering the tone of the instrument, and at the same time preserving its accord.

No. 9,560.—Josiah W. Archibald, Porto Rico, West Indies.—*Improvement in Draining Machine for Sugar.*—Patented January 25th, 1853.

This improvement consists in the use of bags, made of any kind of material, to be filled with sugar, and placed in the "Centrifugal Refining" sugar machine; to keep the sugar from attaching itself to the wire gauze, or perforated cylinder, when the machine is in motion, and is intended to save time, which is occupied (in operating the machine as heretofore) in scraping off the sugar from the wire gauze, or sides of the rotating cylinder, and in removing it from the same, which, by means of the bag, can be effected at once.

Claim.—The employment of a fibrous or flexible bag, made of cotton, linen, hair cloth, or any other substance, placed loosely, or secured by loops, as described in a centrifugal depurating sugar machine, inside of the wire gauze cylinder, and containing the sugar; the bag not being permanently attached to the machine by any screw or clamp, &c., but to be freely placed in and then lifted out of the machine entirely, when the sugar is depurated.

No. 9,561.—Abrathier F. Potter, of Boston, Mass.—*Improvement in "Gold Washer."*—Patented January 25th, 1853.

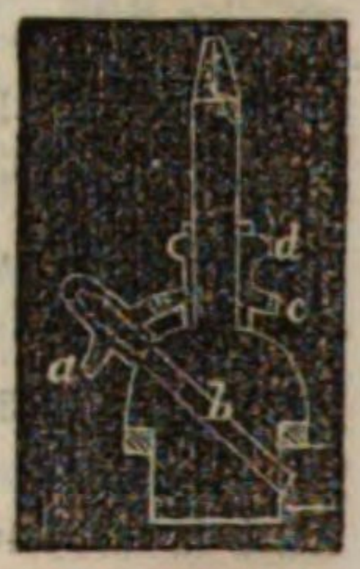
Fig 1.

The nature of this invention consists in a water-wheel L, placed in the tube H (see fig. 2), which conducts the water containing the metal into the apparatus; the wheel L being operated by water as it enters and descends the tube, so as to agitate the water by the motion of the wheel and the arms P P, fixed to the vertical shaft. This wheel may work an additional apparatus to wash the ore or metals before they come in contact with the mercury. The outlets of the tube H conduct the water containing the ore into the bath open at or near the bottom, in an oblique direction at E (see fig. 2); so that the water coming from the tube H acts in combination with the water which issues from the oblique and spiral apparatus, O, in a pipe which surrounds the bath, so as to give the mercury in the bath a rotary motion, and thereby brings all the water containing the ores more effectually in contact with the mercury.

Fig 2

Claim.—A wheel or its equivalent arranged in the tube above mentioned, so as to be operated by the water containing the metals as it descends in the tube so as to agitate the water by the motion of the wheel, whether it is made to operate some other apparatus or not. Also, the openings E F, or their equivalents, in combination with the openings, T T, or their equivalents.

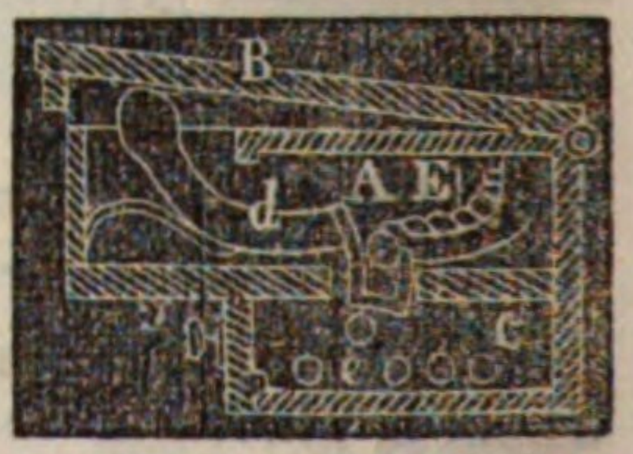
No. 9,562.—THOMAS PROSSER, of New York, N.Y.—*Improved Expansion Drill.*—Patented January 25th, 1853.



This invention consists in a combination of mechanism for producing a continuous expansion in the cutting part of a chambering drill when in motion, and thereby enabling the operator to enlarge a hole previously made in metallic substances, within the thickness thereof, technically called chambering, without changing the cutter or stopping the drill. The cutter *b* (see fig.) is oblique to the axis of the drill. The cutter is set in motion by the bevel wheels *a* and *c*, which wheels can be worked by hand or otherwise.

Claim.—The combination of the inclined cutter *b*, with a screw cut thereon, bevel screw pinion, or its equivalent, and collar *c*, arranged so that by holding said collar, during the rotation of the drill, a continuous feed motion is communicated to the cutter.

No. 9,563.—PETER TALTAVAL, of Washington, D. C.—*Register for Omnibus Passengers, &c.*—Patented January 25th, 1853.



This invention consists of a shallow, oblong box, secured upon or in the position of the upper step of an omnibus, and is provided with a cover, hinged to it, and made to vibrate up and down. In the central part of the box is a compartment in which the device for operating the machine is arranged.

When a person steps upon the step B (see fig.), it depresses; the shank of the shaft is raised sufficiently to allow the lower ball in the tube to escape and fall into a drawer *c*, the key of which is kept by the owner of the omnibus. Each time the step B is depressed, a single ball is allowed to escape; and for each passenger two balls are dropped, one on entering and one in leaving.

Claim.—The springs, operated and arranged in combination with the inclined plane and escapement tube.

No. 9,564.—AUGUSTUS B. CHILDS, of Rochester, N. Y.—*Improvement in Winnowing Machines.*—Patented January 25th, 1853.

This improvement consists in a method of regulating the blast for

the second winnowing of the grain, by combining with the revolving fan, which generates the blast for both the first and second winnowing, a compensation supply valve M (see fig. 1), situate at some point intermediate between the fan and the place at which the grain is winnowed the second time; the operation of this valve being such that it can be opened to admit an increased quantity of air to supply the fan, whenever the fan demands more than could be drawn through the grain, without increasing the strength of the blast to such a degree as would endanger the carrying away of the sound grain with the impurities. Also in a self-regulating delivery valve, which prevents the admission of air while it opens to discharge grain, or impurities separated from the grain, and collected in any receptacle within the machine.

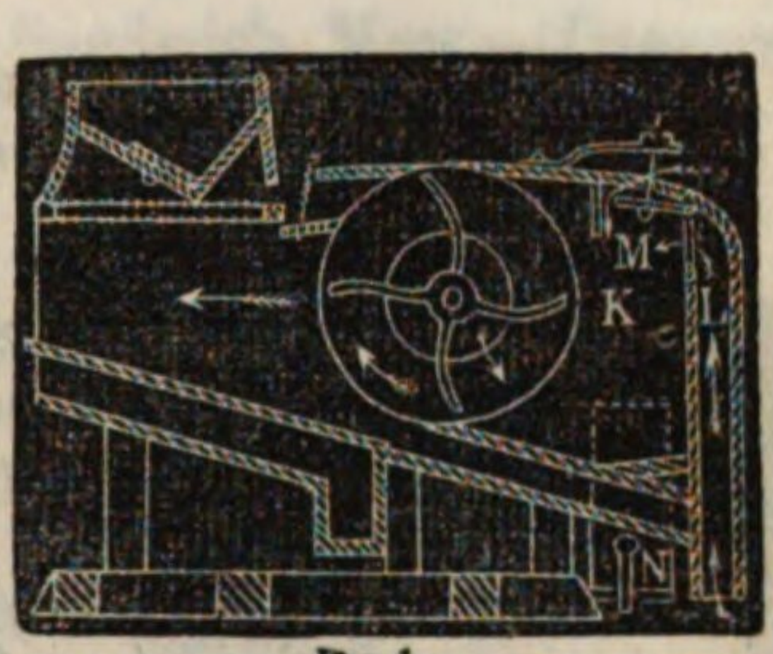


Fig. 1.

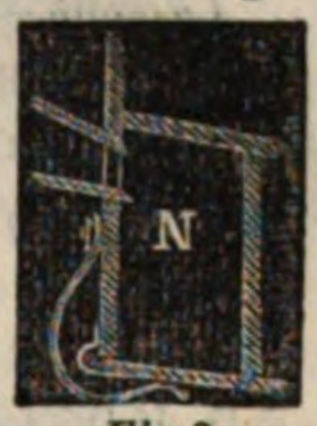


Fig. 2.

The valve box, N, is attached to the casing at the lowest line of the inclined bottom of chamber K. The upper part of the box communicates, by an aperture, with the chamber K; and the seeds which fall upon the bottom of the chamber run into the valve box, where, as a sufficient quantity of the impurities have accumulated in the box, it opens by the weight of its contents, without admitting air.

Claim.—Regulating the blast for the second winnowing of grain, by combining with the revolving fan, which generates both the first and second blast, a compensating supply valve. Also the self-regulating valve, which prevents the admission of air into the machine while it opens to discharge the impurities separated from the grain, and thus prevents an undue accumulation of them at the bottom of the air chamber.

No. 9,565.—CHARLES B. HUCHINSON, of Waterloo, N. Y.—*Improvement in machinery for Cutting Barrel-Heads.*—Patented Feb. 1st, 1853.

This improvement consists in the use of clamp rings to hold the wood for the head, and present it to be cut and dressed by rotating cutters. The wood for the head is placed in the clamp rings N N (see fig.), to present it to the rotating cutters *g g g* and K K K; the cutters being arranged upon a rotating disc and arms, as seen in the figure.

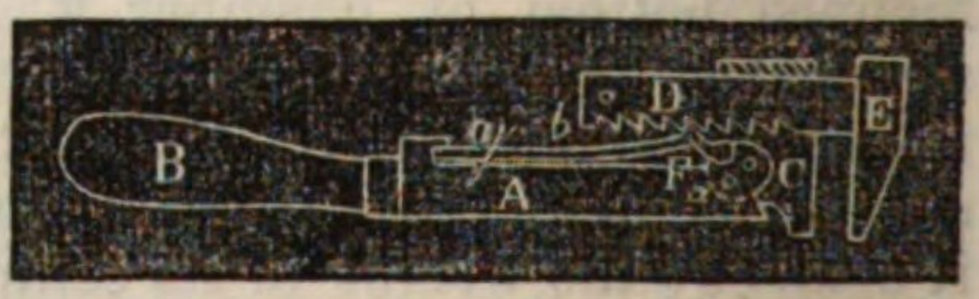
Claim.—The use of clamp rings, N N, to hold the pieces of heading, and hung in pieces on opposite sides, or in any equivalent way so as to be reversible; in combination with the adjustable rotating cutters (*g g g*), to cut and bevel the edge of the head, and with the face cutters, K K K, arranged upon the disc *g*, whereby the opposite sides of the head may be successively presented to the action of the cutting tools, and the head cut out and chamfered and face dressed, or cut out and chamfered only, at one operation.

No. 9,566.—Elijah F. Parker, of Proctorsville, Vt.—*Improvement in the Construction of Frames for Lanterns.*—Patented February 1st, 1853.

The nature of this invention consists in making the corners (of lanterns) or pieces for holding the glass, mica, &c., in one piece, and thereby avoid the necessity of any soldering of these parts. The corner pieces of lantern frames, or those which unite the top and bottom, are made in one piece (see fig); *b* represents the corners, and *a a* the glass.

Claim.—The turning of grooved or sunken flanges upon the frames of lanterns, for holding the glass or its equivalent; so that, when the top and bottom are united, the flanges for holding the glass, &c., shall be already in place to receive it, without any further soldering.

No. 9,567.—George B. Read, of New York, N. Y.—*Improvement in the Screw Wrench.*—Patented February 1st, 1853.



The nature of this invention consists in having the shank D (see fig.) of the adjustable jaw E pass through a recess in the stationary jaw C, which is attached by a pivot to the end of the wrench stock. The shank D of the adjustable jaw is provided with a rack, into which a pawl, attached to the end of the wrench stock, catches.

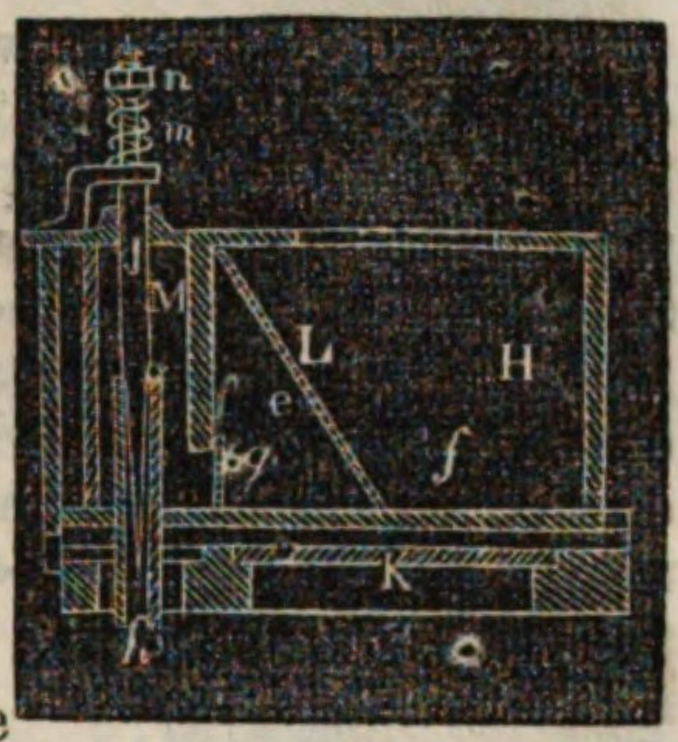
Claim.—The arrangement of the several parts, viz.: the jaw C being attached by a pivot to the stock A, and said jaw C having a recess through it, and through which the shank D of the adjustable jaw E passes, the shank D being provided with a rack, *b*, into which a pawl, F, attached to the end of the stock, catches, the pawl being kept into the rack *b*, by the spring *g*; by which arrangement the two jaws, E C, are forced against the sides of the nut as the handle of the wrench is turned, and the jaws made to bear or bind harder near the corners of the nut, thus preventing the jaws from slipping around it.

No. 9,568.—Matthias Stratton, of Philadelphia, Pa.—*Improvement in Portable Gas Apparatus.*—Patented February 1st, 1853.

The nature of this improvement consists in constructing a *stove, retort, and cooler*, all arranged so as to be *portable in the strict sense of the term*, which may be used for the manufacture of illuminating gas, from rosin or other suitable material.

Claim.—The construction of the stove with removable gates C C, in the ends B, for the introduction of the retort, and the movable section G, under the rosin holder.

No. 9,569.—Benjamin Shiverick, of North Sandwich, Mass.—*Improvement in the mode of feeding Rosin to the fires of Glass Furnaces.*—Patented February 1st, 1853.



This improvement relates to furnaces in which rosin is used as fuel. The rosin is first melted in a vessel or pot by the heat of the fire, and allowed to pass into the fireplace or chamber. The pot or vessel H (see fig.), for melting rosin, is in front of the flame chamber and directly over the fireplace; under the bottom of the pot is to be one or two sliding doors, or dampers, K, to regulate the amount of surface against which the fire may be suffered to act.

The interior of the pot is divided by the strainer L; the rosin is to be placed in the rear chamber *f*, and passes through the strainer into chamber *e*, thence through vertical strainer *g*, into chamber M; in which is a discharge tube which opens into the fireplace. This tube may or may not be surrounded by a strainer. In the upper part of tube *h*, there is inserted a long conical-shaped plug J, attached to a rod with a spring on the top of it, which can be regulated by a nut, *n*. The object of this mode of feeding rosin is to regulate the flow of the rosin down the tube, and freeing the tube from glutinous matter that may accumulate in it, which last operation is accomplished by pressing down the rod of the valve J, and is effected by the spring and nut *m n:* by removing the hand from the rod, the spring brings the rod back to its former position.

Claim.—The combining the long conical valve and the discharge tube, by means of a set screw and nut and supporting spring; whereby the flow of the melted rosin may not only be regulated, but when any interruption takes place, the attendant can readily remove it, either by lifting the valve, or pressing on it: the valve being subsequently removed back to its former position by the spring.

No. 9,570.—Richard Solis, of New Brunswick, N. J.—*Art of re-manufacturing Insoluble Rubber.*—Patented February 1st, 1853.

This invention consists in the art of re-manufacturing what is commonly known and called metallic vulcanized or insoluble rubber. The vulcanized rubber is cut into small pieces, and subjected to mastication by any suitable machinery; when ground to powder, it is in that state mixed with a paste made of ordinary India rubber and spirits of turpentine—equal portions of each. The inventor says that a good fabric may be made by the mixture of equal parts of the vulcanized rubber with the native rubber, and then dried in the sun and air without artificial heat.

Claim.—The manufacture of India rubber fabrics, by the mixture of ground or powdered vulcanized rubber with the ordinary India rubber of commerce.

No. 9,571.—Isaac L. Pulvermacher, of Breslau, Prussia.—*Improvement in Hydro-Electric Voltaic Batteries and Chains for medical purposes.*—Patented February 1st, 1853.

The nature of this invention consists in forming galvanic elements of a positive and negative metal, separated from each other, and combined and in contact with porous non-conducting substances, which porous substances will absorb and retain the existing fluid, and impart it to the metals to excite the electric action. Also in constructing various shaped chains. Fig. *a* is a chain composed of a series of elements linked together, each one of which is ar electric pile; each link is a positive metal, with a flat plate of negative metal inside, and with a porous non-conducting substance, such as linen, cloth, leather, &c., interposed. The links are formed by placing the negative metal outside, and the positive metal inside. This arrangement presents certain difficulties (to wit: it does not present sufficient surface for producing electric currents), which are overcome (by the inventor) by making a hydro-electric chain, which becomes electric when brought in contact with the human body; when moistened with any diluted acid, it makes a powerful portable pile on a small scale (see fig. *b*). The element is composed of zinc and copper wire, coiled as a helix, and around a cone formed of small pieces of wood and copper wire inverted in a hole inside.

Claim.—Constructing galvanic elements of positive and negative metals, separated from each other by a porous non-conducting substance, when the porous non-conducting substance is surrounded and held by one or both of said metals. Also forming the galvanic elements by coiling, in the form of helices, the positive and negative wires in grooves previously made in the surface of an inner core of wood or other porous substance; so that when the wires are wrapped around in the grooves, they shall both be in contact with the porous substance within and separate from each other. Also forming a chain of a series of elements substantially such as herein described, by means of ties or links. And finally, the methods of interrupting the currents of electricity, by means of the spring vibrating conductor, interposed substantially as herein described for the purpose of breaking and closing the circuit by the movement of the human body, or other like motion.

No. 9,572.—Jean Baptiste Moinier and Pierre Hippolyte Boutigny, of Paris, France.—*Improvement in purifying fatty materials.*—Patented February 8th, 1853.

This improvement, or discovery, applies to the treatment of fatty materials with alkalies. It consists in causing to pass through the mixture of fatty materials with alkalies, a strong current of sulphurous acid gas, which frees the mixture from impurities, and hardens it, so that a superior kind of candles or tapers will be produced there-

from. The residue is treated in like manner, successively, till the matter is entirely exhausted.

Claim.—The introduction and mingling of a current or currents of sulphurous acid gas, with mixtures of fatty acids and alkalies, preparatory to the process of being converted into candles, tapers, and other articles for burning; thereby causing them to burn with a stronger, clearer, and brighter light.

No. 9,573.—NATHANIEL A. BOYNTON, of Boston, Mass.—*Improvement in Hot-Air Furnaces.*—Patented February 8th, 1853.

Fig. 1 represents a vertical section of the furnace; and fig. 2 represents a top view of the hollow "wheel radiator." This improvement consists in the construction and the application of the hollow "wheel radiator," and the valve and valve-seat. G is the hollow rim of the wheel, which is provided with hollow spokes, M M′, L L′. H is the hollow hub; S the smoke-pipe; and A the outer casing of the radiator.

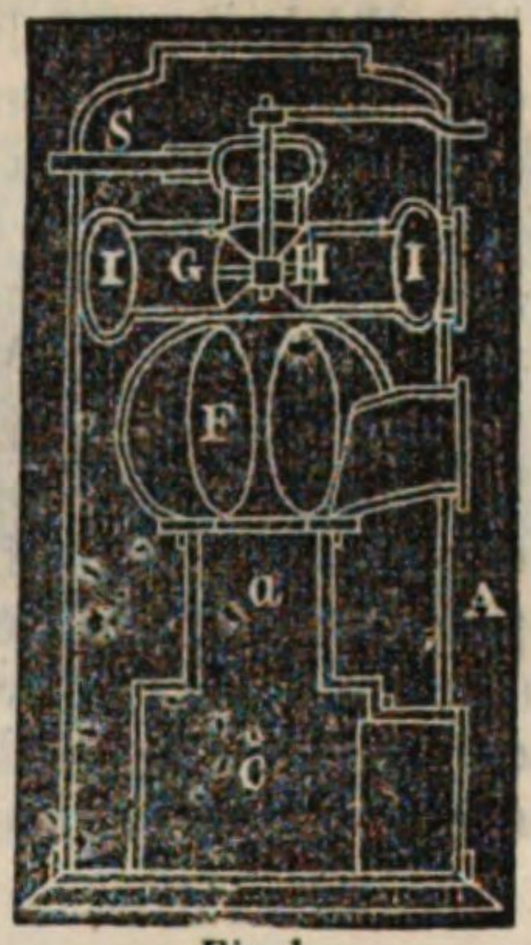


Fig. 1.

Claim.—The hollow wheel radiator, made with a hollow rim, hollow spokes, a hollow hub (open at top and bottom), and a valve and valve seat, so made and applied to the hub, that when the valve is closed it shall cause the heat and volatile products of combustion to pass through one or more of the arms, and into and through the hollow rim, thence out of the rim through the other arm or arms, and into the hub, and over the valve; and also so that when the valve is opened, the heat and volatile products of combustion may pass directly up through the hub, without first circulating through the hollow arms and rim.

Fig. 2.

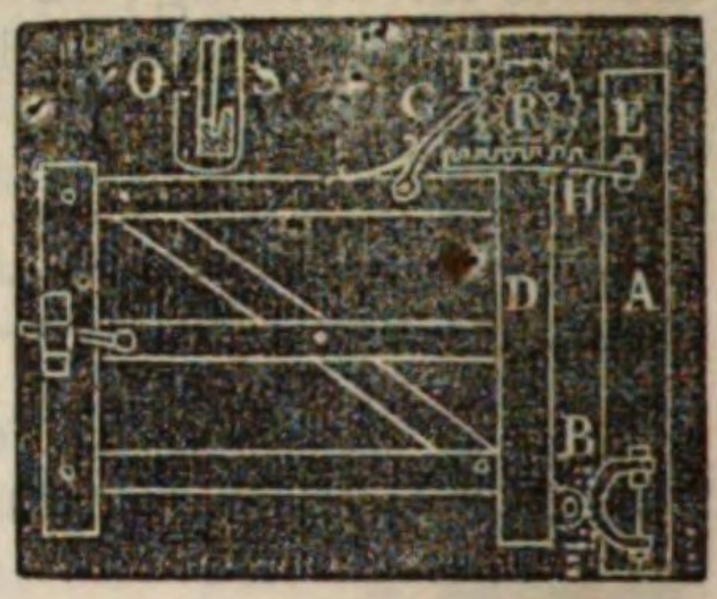
No. 9,574.—GEORGE CHASE, of Prudence Island, R. I.—*Improved method of hanging the sliding keel and rudder of vessels.*—Patented February 8th, 1853.

The nature of this improvement consists in providing a vessel with a stern post A (see fig.), which may slide up and down in guides or ways, and in attaching thereto the rudder B, also the rear end of the centre-board or keel (the front end being hinged by a pin D, or otherwise, near the bow); so that when the centre-board strikes in shallow water, or when it is raised or lowered for any purpose whatever, the rudder shall also rise or fall with it.

Claim.—Attaching the rear end of the movable centre-board and the rudder to the sliding stern post, so that the said centre-board, stern post, and rudder may be raised or lowered together. The sliding stern

post serving as an indicator to the positions of both the rudder and the centre-board.

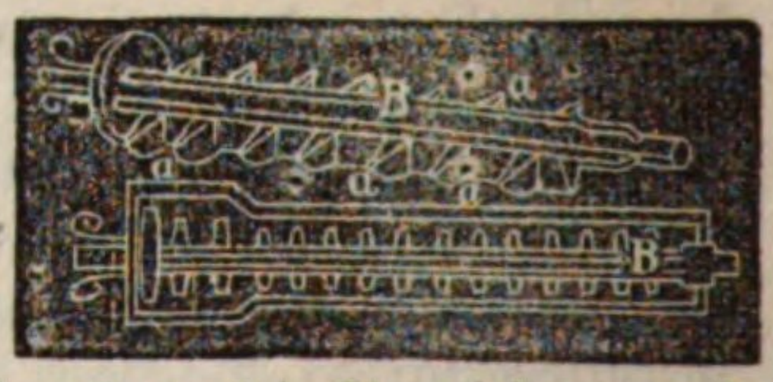
No. 9,576.—John Filson, of Milroy, Pa.—*Improved method of Hanging and Catching Gates.*—Patented February 8th, 1853.



This invention consists in providing a device, by which a gate may be raised or lowered, and detained at any desired height, when obstructed in shutting by coming in contact with the ground, snow, or ice, or other obstructions beneath it; also in a contrivance by which the catch of the latch may be raised or lowered to suit the height of the gate. (See fig.) A, is the hinge post; B, the double-jointed hinge; D, the back post of the gate; E, the elongated rack hinge; F, the ratchet wheel: G, the pawl; R, the cog wheel working in the rack hinge. When the gate is lifted up, the rack forces the cog wheel R to turn with the ratchet, the pawl G preventing the turning back, keeps the gate at the point desired. The catch works up and down in a slot, O, in a metal plate, S, and can be set at the necessary point to suit the height of the gate and of the latch.

Claim.—The lower double jointed hinge, in combination with the apparatus attached to and constituting the upper hinge for the purpose of holding the gate at any inclination required.

No. 9,577.—George Peacock, of West Troy, N. Y.—*Improvement in Pipe Moulding.*—Patented February 8th, 1853.



The nature of this invention consists in providing a lozenge-shaped iron bar having, *a*, semi-circular or other shaped wings or projections on its lower half. The bar is termed *the core-bar*, and is fitted in a core-box *b*, and the sand packed and adjusted around it, the wings or semi-circular projections binding the sand, and causing it to adhere to the lower portion of the bar. The sand is placed over the upper portion of the bar, and rounded or shaped perfectly semi-circular by means of a sweep. The bar, when properly encompassed by the sand, forms the core. The core-bar may be so arranged as to be adapted to form cores for elbows, branch pipes, &c., Fig. *a* represents a perspective view of the core-bar, and *b* a top view of the core-bar in the box.

Claim.—The core-bar, B, having transverse wings or projections *a*, of semi-circular or other shape, corresponding to the shape of the article to be cast; said wings or projections permitting the sand to be rammed for forming the lower half of the core, and holding or binding the sand to the lower part of the bar, and allowing the upper part of the core to be made by the sweep. Also, the manner of anchoring the core-bar by means of the metal strips or bridges fitting in recesses in the upper surface of the core-bar, said bridges resting upon wooden

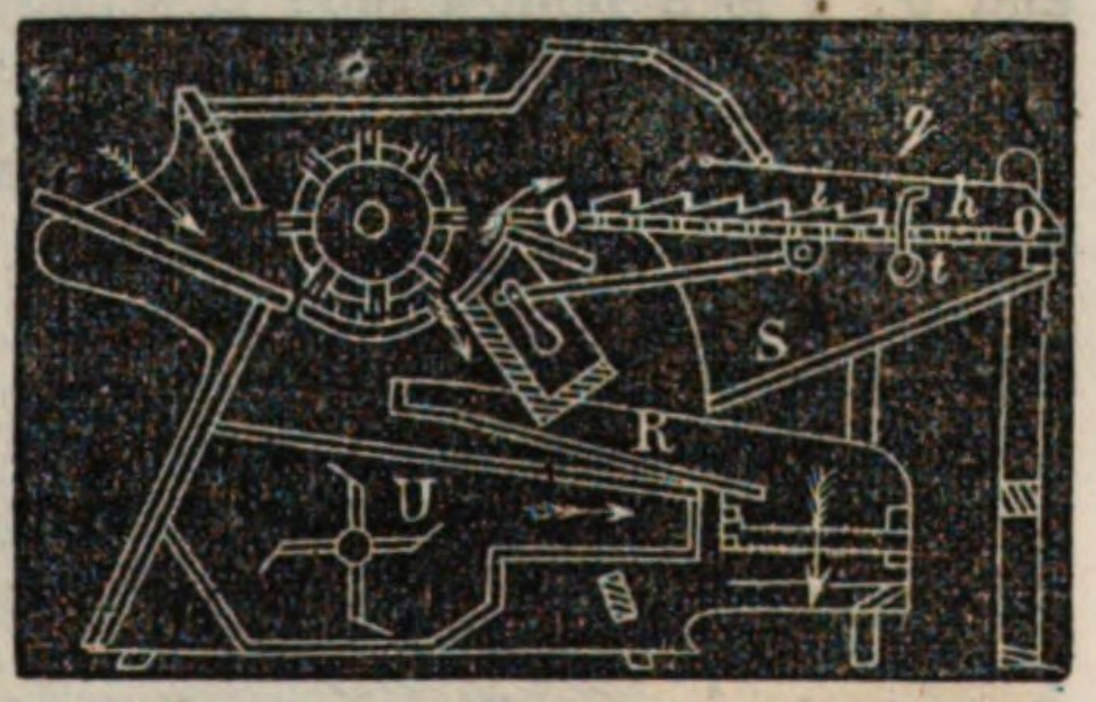
supports, and having anchor rods bearing upon their upper surfaces; the liquid metal burning out the wooden supports, and allowing the core to be withdrawn, by which means the core is prevented from being raised or forced upward by the liquid metal as it is poured into the mould; and thus pipes of any length may be cast. Also, the manner of jointing the core-bars for forming cores for elbows or branch pipes, by means of wooden wedges which hold the bars together while the core is being formed; the wedges being burnt out by the liquid metal, and thus allowing the cores to be withdrawn.

No. 9,578.—Charles Peters, of Trenton, N. J.—*Improvement in Moulds for uniting Steel to Cast Iron.*—Patented February 8th, 1853.

The nature of this invention consists in forming a solid basis of iron, brick, or other hard material, to the mould, with an aperture therein of the shape of the steel or wrought iron sought to be welded; and thus, by means of the said aperture, subjecting the steel or wrought iron while in the mould to the fire, until heated to welding heat.

Claim.—The use of a solid base to moulds in which steel or wrought iron is to be welded to cast iron, with an aperture in the same, so that steel or wrought iron can be subjected to the heat of the furnace while in the mould.

No. 9,579.—J. F. Zimmerman, of Charlestown, Va.—*Threshing and Clearing Grain.*—Patented February 8th, 1853.

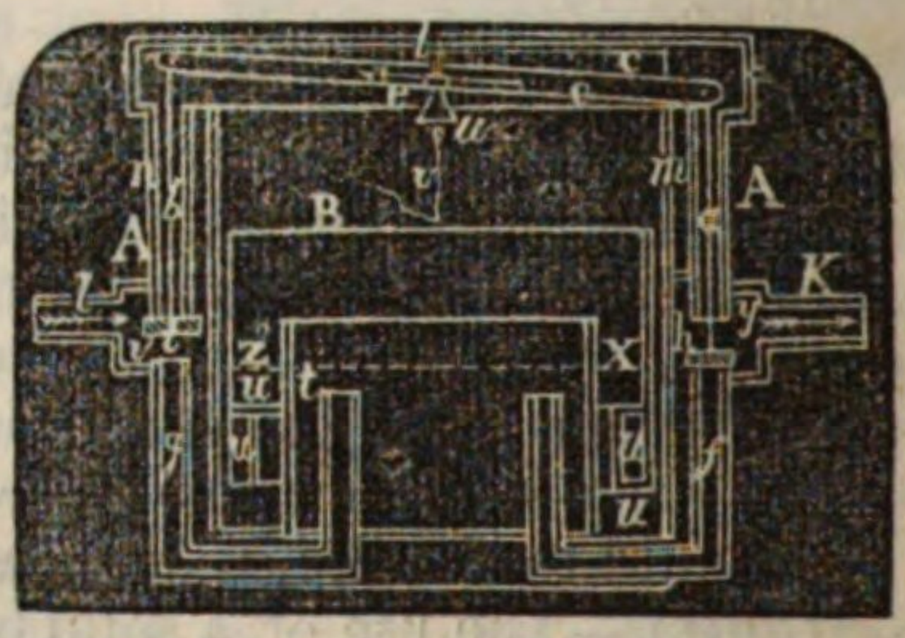


An essential advantage in this improved thresher is the straw deliverer, or vibrating table (says the inventor.) There are side pieces *h h* (see fig.), to which a table or straw-platform, *o*, *o*, is attached, having several saw-like parallel running strips *i*, attached to it at proper distances. The platform or straw-table, *o*, has a number of perforations or holes acting as a riddle or screen. To the table is attached a sloping bottom, s; the table and scoop hang by straps to allow it to move; the vibration is produced by a rod and crank in the ordinary way or manner; through several of the holes of the vibrating table *o*, pass curved prongs *q*, attached to a horizontal axle working underneath the platform. The saw-like teeth *i*, are used for the purpose of pushing the straw forward in its passage from beneath the concave thresher; and the curved prongs *q*, are used to beat the straw and shake out what grain may have been left by the thresher; and they fall through the holes in the table, upon the scoop s, and

from these upon the inclined plane R, into the screen or riddle, where it is acted upon by the current of the fan-blower U.

Claim.—The invention, use, and application of the perforated vibrating table, *o o*, arranged to a sloping bottom or platform *s*, and the parallel saw-like strips or straw-pushers *i*, combined with an oscillating rake, and straw-beaters or curved prongs *q*; the whole combined and working with the oscillating hinged standard and suspending straps, as shown in the figure.

No. 9,580.—E. R. HALLAM and T. B. BARNARD, of New Haven, Conn. —*Improvement in Gas Meters.*—Patented Feb. 8th, 1853.



A is the external cylinder (see fig.), to the bottom of which is fastened an inner cylinder *t*, thereby forming an annular space *u*. B is a cylinder with a hollow ring, *w*, at the bottom, which serves as a float to counterbalance the weight of the cylinder B, the annular space *u* being filled with water or other liquid up to the line *x z*; *l* is the receiving pipe, through which the gas passes into the valve box, and thence into the cylinder B, through the pipe *u*; K is the delivering pipe, through which the gas passes from the space within the cylinder B, through the pipe *f*, or from the space above the cylinder B, through the pipe *m*, to the valve box *y*, and thence to the burners; *h* and *i* are the valves by which the gas is directed in its course through the pipes *g n f* and *m*; *c* is the beam that works the valves *h* and *i*, by means of the rods *a* and *b*; *e* is a hollow tube attached to the beam *c*, by a centre on which it can vibrate; *l'* is a bent wire for the tube *e* to strike against, when it is raised or lowered by the cylinder B, by means of the button *w'*, and cord *v'*; *c'* is a stationary bearer fixed to the cylinder A, and carries the beam *c*; B' is the centre of the beam, *c*; E is a bracket carrying the end of the pivot B'. The quantity of gas passed through this machine is measured by the cylinder B, which may be made to work an index on the top of the machine.

Claim.—Constructing meters with one cylinder working within another, so that the gas passes alternately into the inner cylinder and out of the space above it, and then out of the inner cylinder, while the supply enters the space above it, the gas being changed in its course or direction by valves.

No. 9,581.—H. LE RIEMONDIE, of New Orleans, La.—*Improvement in Surgical Instruments for examining the Ear, Eye, &c.*—Patented February 8th, 1853.

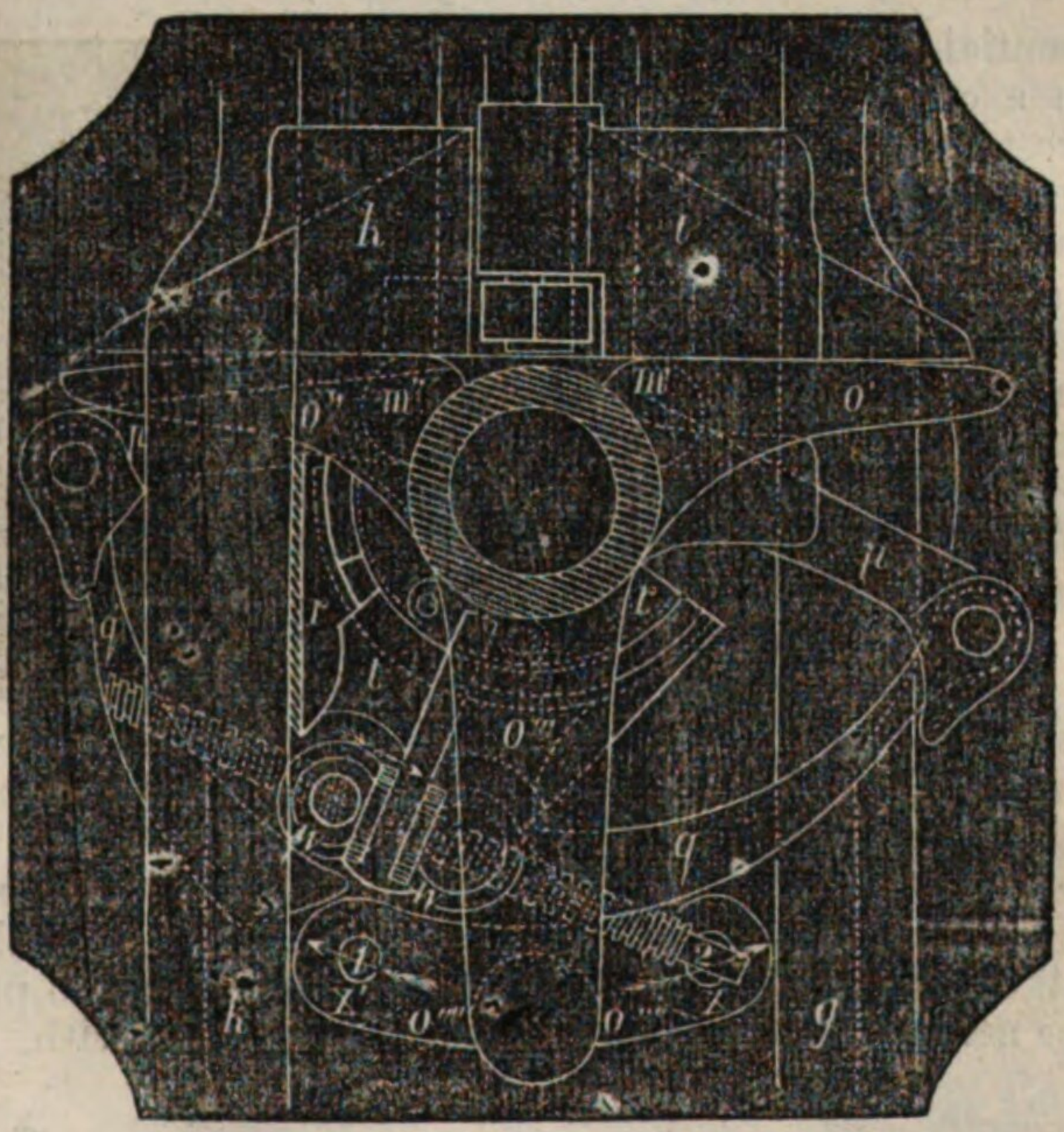
The nature of this invention consists in the construction of such an instrument that the part to be examined may be seen by light reflected upon it from the interior of the instrument. In using this instrument, the lenses G (see fig.), and the reflectors I, must be

adjusted (which are made of silvered plate). The lamp C is lighted and put into the case A; the light is reflected by the concave reflector I, to the oblique plane reflector D, and from that to the reflector E, thence to the object examined at the end of the tube X, and then through the tube F, and lens G, to the eye of the operator. When the ear or nose, or other part, should be examined, the tube E is inserted.

Claim.—The construction of an instrument for examining the interior of the ear, nose, eye, or other part of the human system, by the combination of the reflectors I D E; the lens F; case A; tubes B H D; and lamp C.

No. 9,582.—HORATIO ALLEN and D. G. WELLS, of New York, N. Y.—*Improvement in Valve Gearing of Steam Engines.*—Patented February 15th, 1853.

This improvement consists in the mode of simplifying the arrangement of cut-off valves. This is accomplished by placing the rock-



shaft which carries the exhaust valve toes in the same plane with the valve stems, about midway between the upper and lower steam chests. To this rock-shaft, so placed, the exhaust valves' toes are permanently attached; under this shaft are placed the loose toes, or secondary toes, by means of which the steam valves are operated. Motion is given to raise the loose toes by means of an arm permanently fixed to the rock-shaft, and to lower them by means of an arm having its centre on the rock-shaft, and deriving its motion from any

part whose motion commences with or slightly precedes the motion of the piston rod.

Claim.—The combination of pawls with the two arms, whereby the valves are lifted and tripped.

Also, the combination of the arms provided with rollers, which, in their action, assist in transferring the pawls from one arm to the other, with the pawls and loose toes.

Also, the making the rollers adjustable, with reference to each other, by means of supporting them on independent arms, and connecting them to each other and the arms by means of a right and a left screw, whereby the point of cut-off may be altered.

Also, the mode of operating the loose toes by means of pawls and rollers.

Also, the mode of working the valves by hand, by means of toes supported on the rock-shaft.

No. 9,583.—JOHN BRIGGS, of Boston, Mass.—*Improvement in Rail-Road Car Seats.*—Patented February 15th, 1853.

The essential feature of this improvement consists in a curved sliding seat, upon which the back rests, which slides in or out, and can be fastened in any desired position. The annexed figure is a sectional side view of the car seat: *e* is a groove in the side of the frame *a*, in which the bar *c* travels. This bar has notches on its under side; *g g* are foot rests. The curved bar *c*, and consequently the seat *b*, is kept in any desired position by the bent springs *h h*, attached to the top of the foot rests *g g*. The springs enter any of the notches *d d*, and hold the seat firmly. The spring by which the back of the seat is held, when open, enters a metallic socket *i i;* from which it can easily be relieved when the back is to be folded up, on the springs *k k*, attached to the outside of the back, being pressed upon.

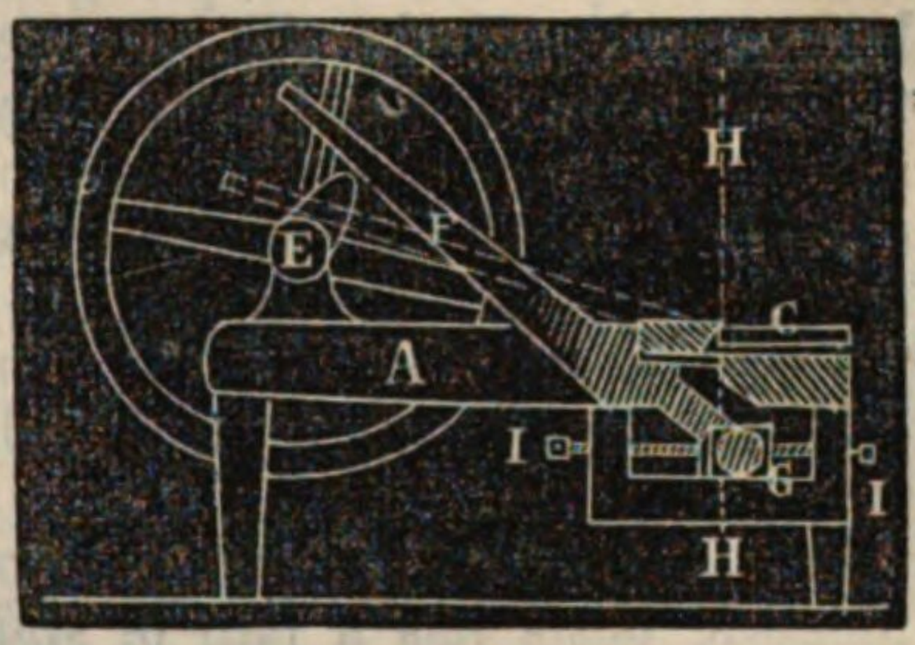
Claim.—A seat sliding in an arc formed in the frame-work of the chair, and fastened in any desired position; whereby the back is made to follow the motion of the seat, in such a manner as to preserve a constant or nearly constant connexion and angle therewith.

No. 9,584.—DARIUS C. BROWN, of Lowell, Mass.—*Improvement for knitting Weavers' Harnesses.*—Patented February 15th, 1853.

Claim.—Fliers constructed with a spring-nose or its equivalent, so as to yield the twine when the needles draw the stitches into the rest, and to take up the binding twine, or draw it tight when the stitches slip off of the needles. Also, the apparatus, or its equivalent, for shoving the eyes off of the rod, consisting of the cam, slides, rod,

lever, &c. Also, the revolving spring-nose flier or its equivalent, in combination with the needle or its equivalent.

No. 9,585.—Joshua C. Cary, of Richmond, Va.—*Improvement in Spike Machines.*—Patented February 15th, 1853.

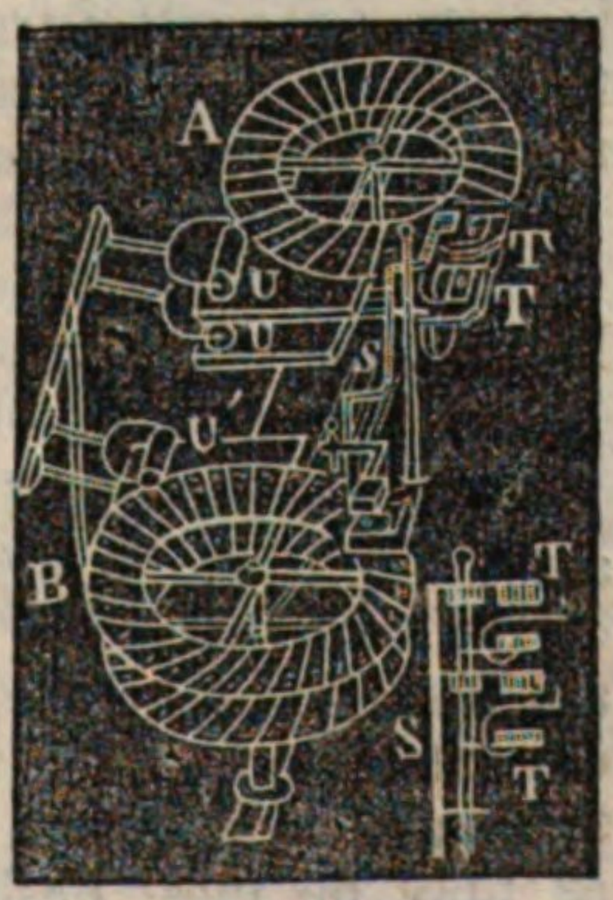


The nature of this invention consists in sustaining the heading lever upon a movable fulcrum, so that it shall be capable of a nice adjustment, so as to throw the fulcrum of it to any point inside or outside of a vertical line, drawn touching the plane of the face of the griping dies or at a right angle to the spike rod, whereby the machine is enabled to bend the end of the rod up or down or otherwise, according to the adjustment, and effect the heading of the spike in either direction, in one single motion upon its fulcrum.

The figure shows a section of the machine. F is a heading lever, moving on an axis G, which can be adjusted by set screws I I. If the fulcrum is adjusted inside of the dotted line H H, the machine will effect a heading of the spike upward; and if adjusted outside of said line, the heading will be effected downward. The dotted lines B B represent the lever working the movable jaw.

Claim.—Sustaining the heading lever upon a movable fulcrum, so as to be capable of adjustment to the requisite distance, inside or outside of the vertical line drawn, touching the plane of the face of the griping dies, for effecting the heading of the spike either up or down or otherwise, in one single motion upon its fulcrum.

No. 9,586.—Richard M. Leslie, of Philadelphia, Pa.—*Improvement in Paging Books.*—Patented February 15th, 1853.



This invention consists in two pairs of metallic wheels, each wheel having a flange of spring sheet metal, from one to two inches wide, and cut into slats from the outer edge of the flange, in as far as the outer edge of the solid wheel, thereby cutting the entire flange from the diameter at a tangent into spring slats of uniform size. To the upper surface of each of these slats is cemented a copper type forming permanent numbers from 1 to 1,500, as may be required. The wheels are supported horizontally by two metallic tubes, about six inches high; the lower end of the tubes is attached to a brass plate, which lies on and is secured to a table or bench; these wheels have an axle or rod which passes

through the tube to a ratchet wheel, and is secured to its centre by a nut and screw. This ratchet wheel is propelled under the table which revolves the slat wheels A and B, the distance of the width of one of these slats. Between the two pairs of slat wheels elevated above the table are two upright metallic posts, elevated at an equal distance above the table, with two arms extending from each post to a position immediately under two spring slats of each wheel, which are about to be pressed upon for the purpose of printing the numbers contained thereon, and to which slats they rest as supports. To each of these arms there is a frame T, made of spring sheet metal, for placing the corners of the leaves of books, &c., when about to print the numbers thereon. There is a hole in the bottom of the frame, through which the type protrudes when the frame is pressed down underneath each of these frames; and fastened thereto is a knob which presses upon the slat immediately following the one in use, which prevents the frame from rubbing the ink off of the type to be used. Each of these metallic posts has a pair of sliding arms for the purpose of pressing the corners of the leaves that are in the frame upon the types or numbers about to be printed from. These arms are raised or lowered by means of a rod, s, fastened to them, which, passing down through the table, is secured to and works by a treadle. There are two pairs of inking tables, U U U', and inking rollers moving thereon located between the two pairs of slat wheels in the rear of the arm posts, each table being level with its opposite flange, and having a ledge underneath each flange for supporting the slats as the inking rollers pass over them when inking the type; on the wheel A B there are four inking rollers, propelled forward and back by means of a rod attached to them running down and secured to the treadle by which it is worked. T is a metallic spring frame for placing the corners of the leaves upon when about to make the impression; it has a hole in the bottom for allowing the type to protrude through, when the leaves and frame are pressed down by one of the arms R. U U are inking tables; W, inking rollers.

Claim.—The spring slat type wheels made after the manner, and operating for the purposes described. Also, the combination and arrangement of the spring slat type wheels, the adjustable posts S, sliding arms R, spring frame T, inking rollers W, with their tables U, and the rod K, with its ratchet and pawls, whereby one side of four pages may be numbered at a single movement of the treadle.

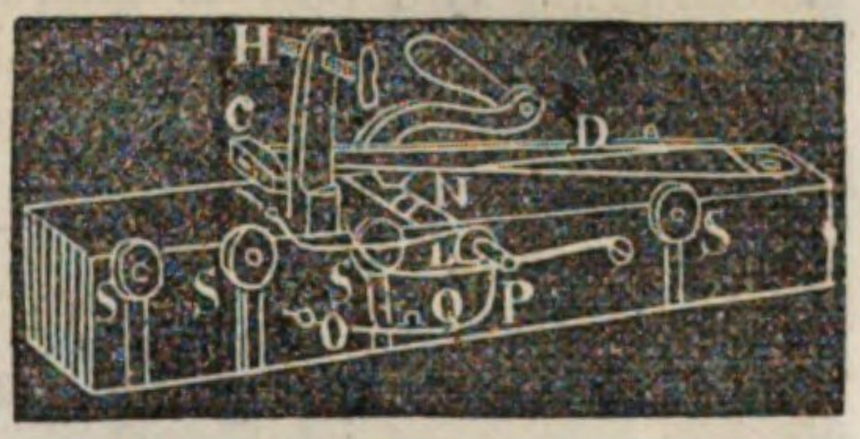
No. 9,587.—Louis F. Sheppard, of Alhambra, Ill.—*Improvement in Artificial Teeth.*—Patented February 15th, 1853.

The nature of this invention consists in the application of a suitable metallic plate to the back and masticating portion of the tooth or teeth, so as to protect them more effectually against injury in use, the plate being so constructed as to cover the ends of the teeth which perform the chewing; and the back of the teeth may be partially or entirely covered, as may be most desirable, to connect the covering of the ends to the plate to which the teeth are fastened, and which

connects them together; the ends of the teeth being fitted to receive the metallic plate by grinding or otherwise. (See fig.)

Claim.—Extending a suitable metallic plate over the masticating portion of artificial teeth, to protect them more effectually against injury from use.

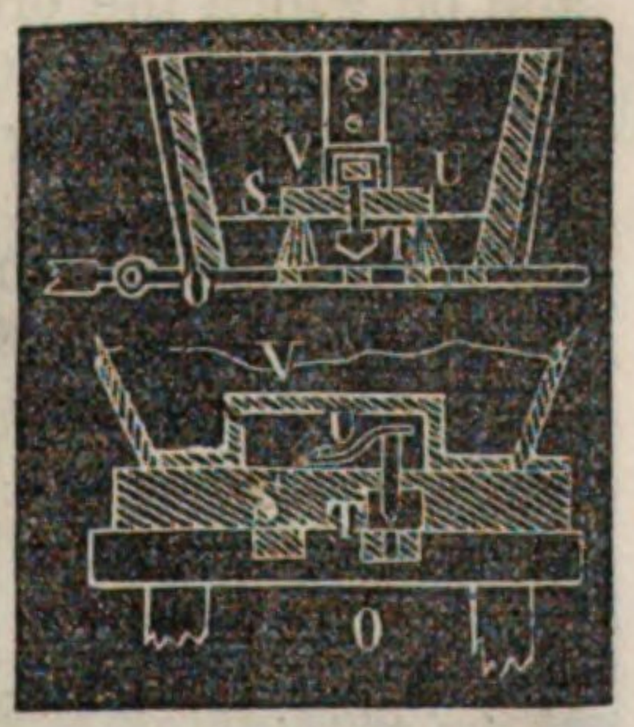
No. 9,588.—Rand B. White, of Mendon, N. Y.—*Improved Saw-Setting Machine.*—Patented February 15th, 1853.



This improvement consists in the construction of a machine for setting saw-teeth to any required angle, and with uniformity of angle, by means of a spring hammer *c* (see fig.), attached to the handle or spring D, so that the blow of the hammer is regulated by the spring, and strikes each tooth with equal force. The spring D is operated upon by a cam on the shaft N. The tooth-gauge O P Q, or spring, takes hold of every other tooth, and draws the saw back into the required position to receive the blow from the hammer, striking against the upright F; the tooth-gauge being operated by a cam L, on the same shaft N by which the hammer is drawn back, the teeth of the saw are always brought into the required position by means of the set screw H, and the wheels s s s s, so as to receive the blow of the hammer, and thus the teeth are all set even and alike.

Claim.—The combination of the spring hammer *c* and D with the tooth-gauge O, P, and Q, operating in the manner and for the purpose described.

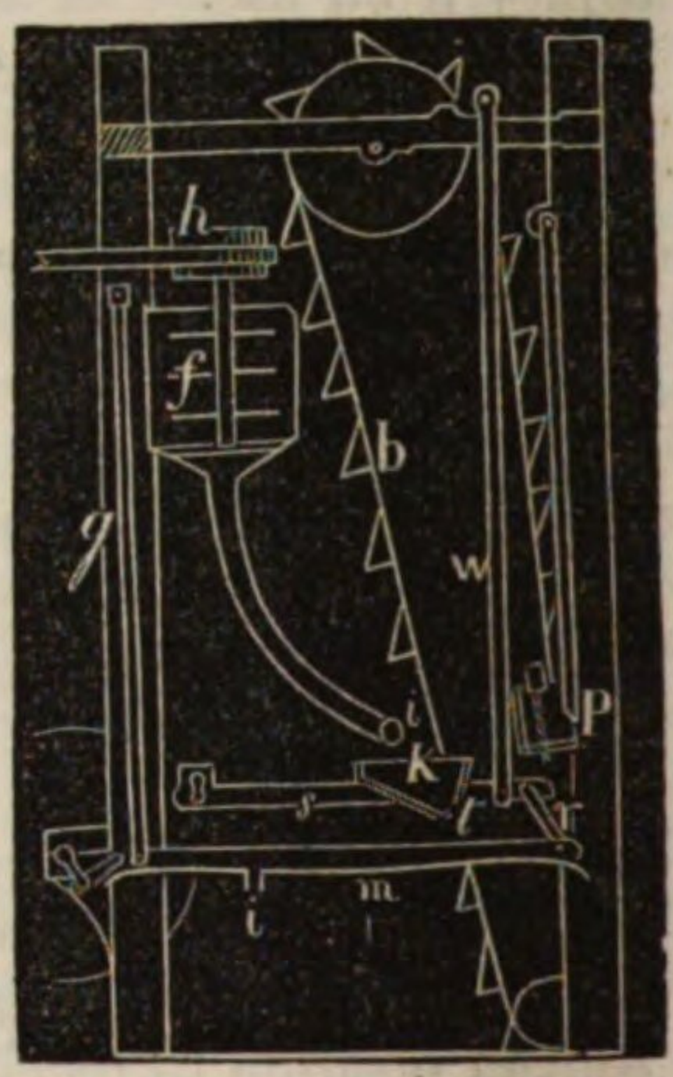
No. 9,589.—David Wolf and Herman Wolf, of Lebanon, Pa.—*Improvement in Seed Planters.*—Patented February 15th, 1853.



This improvement appertains to the arrangement of clearers T (see fig.), for keeping the openings in the slide or slides O from choking. The clearer T moves up and down in a vertical opening in the bridge S, being held down upon the side by a flat spring U, bearing against the upper end of the pin; so that as the slide reciprocates, or moves back and forth, the clearer rises and falls, forcing the seed through and keeping the apertures from choking. This spring is covered with a cap V, which prevents the seed in the hopper from coming in contact with it. The lower end of the clearer is rounded so that it rises out of the seed aperture, whilst the spring U will again force it down; and in this way the clearer is made to serve an important office in the machine.

Claim.—The movable clearer T, arranged and operating in the manner and for the purpose described.

No. 9,590.—Hezekiah Bradford and Elisha Fitzgerald, of New York, N. Y.—*Improvement in Apparatus for Separating Ores, or other substances, of different specific gravity.*—Patented February 22d, 1853.



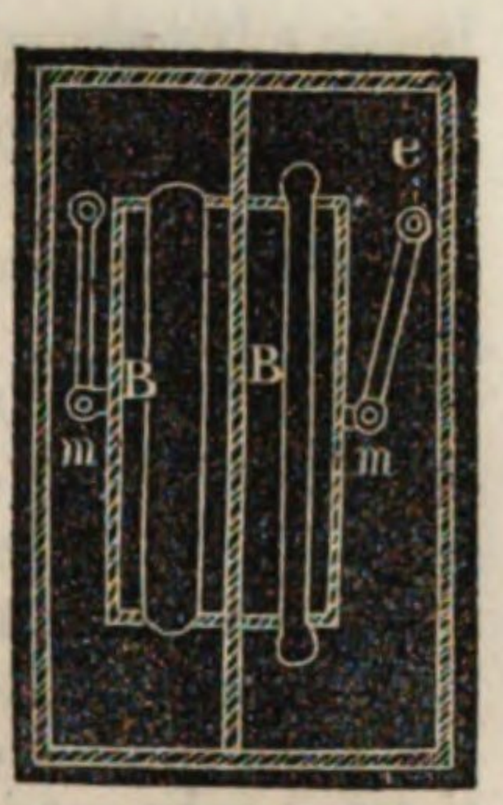
This improvement consists in giving (by machinery) to a pan (suspended, and slightly inclined or curved upwards) a motion resembling that given by hand, in separating copper ore on a shovel, in the operation called vanning. The pan is suspended to pendulous rods, and caused to have a vibrating motion. Its backward motion or movement is made in a shorter space of time than its forward motion. A current of water is caused to flow into the pan. (See fig.) *w*, *g*, and *r* are the rods for vibrating the pan *m*. The substances are raised by the endless belt and buckets *b*, and carried through funnel *f*, provided with a whirl *h*, into trough *k*, and from that upon the pan *m*. The water passes through P, and carries back those substances which have less momentum than the particles of the greatest specific gravity, which overcome the current and are discharged over the front end. The lighter particles, which are overcome and carried back by the current, are discharged through a series of holes *i* in the bottom of the pan. Besides the vibrating horizontal motion, the pan has also an upward and downward motion at the same time.

Claim.—Giving to the reciprocating pan the peculiar motion above described. Also giving to the pan the back movement in a less period of time than the forward movement, by means of a crank or cranks, whose axis of motion is below or above the plane of motion of the rear end of said pan, or by equivalent means. Also, in combination with the pan having the motions or either of the motions specified, and on which the ore, &c., mixed in water, is supplied at some point towards the middle or back, the employment of a current or currents of water, descending the inclined or curved surface of the pan. Also, making the rear end of the pan with an inclination, or curve upwards. Also, making the pan (operated as specified) with apertures back of the place where the substances to be separated are supplied. Finally, making the front and rear ends, or either, of the pan (having the vibrating motion) with a gradual curve downwards, substantially as specified, when the same is employed in combination with currents of water.

No. 9,591.—Alexander A. Croll, of London, England.—*Improvements in Gas Meters.*—Patented February 22d, 1853.

The object of these improvements (in the gas meters known as "dry gas meters") is to prevent the flickering of the light, so commonly resulting from the use of this kind of meter; and the production of an accurately registering apparatus. This meter has two movable partitions B (see fig.), giving motion to two axes *e e*, which

work the valves and the registering wheels. Accuracy in measuring gas is obtained by employing as large a disk of metal, and surrounded by as narrow a margin of flexible material, as possible.



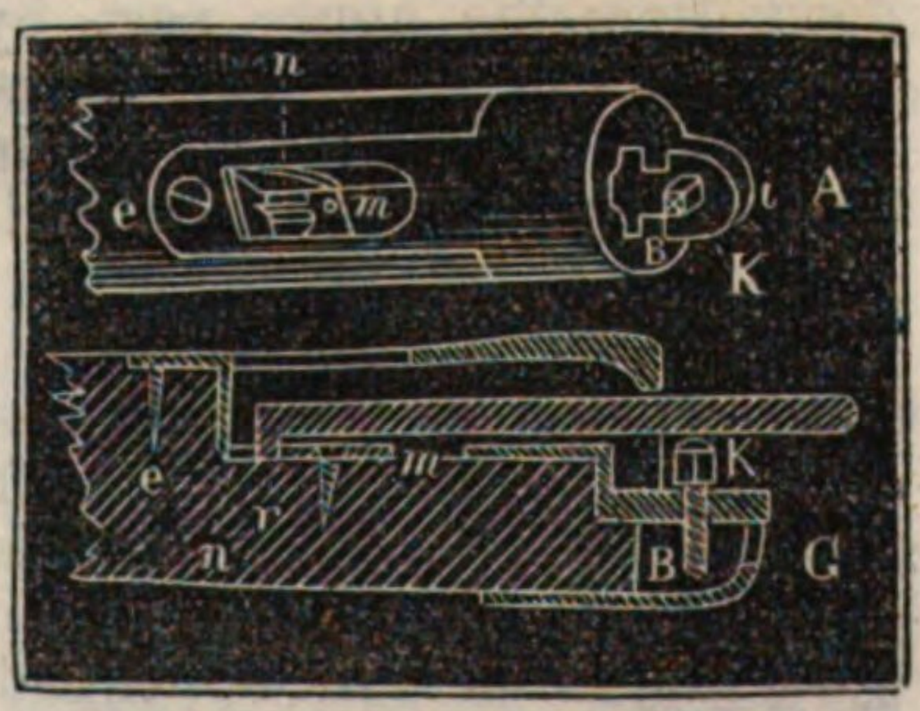
Claim.—The mode of arranging movable partitions or plates B, so that the flexible material at the circumference of the plates shall not be bent, but in one direction. Also, the arrangement of the arms, with the valves and movable plates B of a dry meter, as set forth.

No. 9,592.—William H. Johnson, of Granville, Mass.—*Improvement in Sewing Machines.*—Patented February 22d, 1853.

This invention consists in making a seam, or uniting two pieces of cloth, by means of the peculiar double loop-stitch; the loops of the stitch being made upon one side of the cloth, formed from two continuous threads, by the use of two needles with eyes near their points, one of the needles carrying its thread through the cloth, and the other working entirely on one side, the needles passing alternately into loops formed in their threads, thus forming the double loop-stitch on one side of the cloth. The needles and feeding arrangement being moved by cams driven by suitable mechanical devices. The figure shows the double loop-stitch produced in the manner above described.

Claim.—Making the double loop-stitch, having the loops upon one side of the cloth, by means of two needles combined, &c. Also, making a seam, or uniting two pieces of cloth, by means of the double loop-stitch from a single thread on one side, and on the other of a continuous chain, formed of a succession of double loops from the threads.

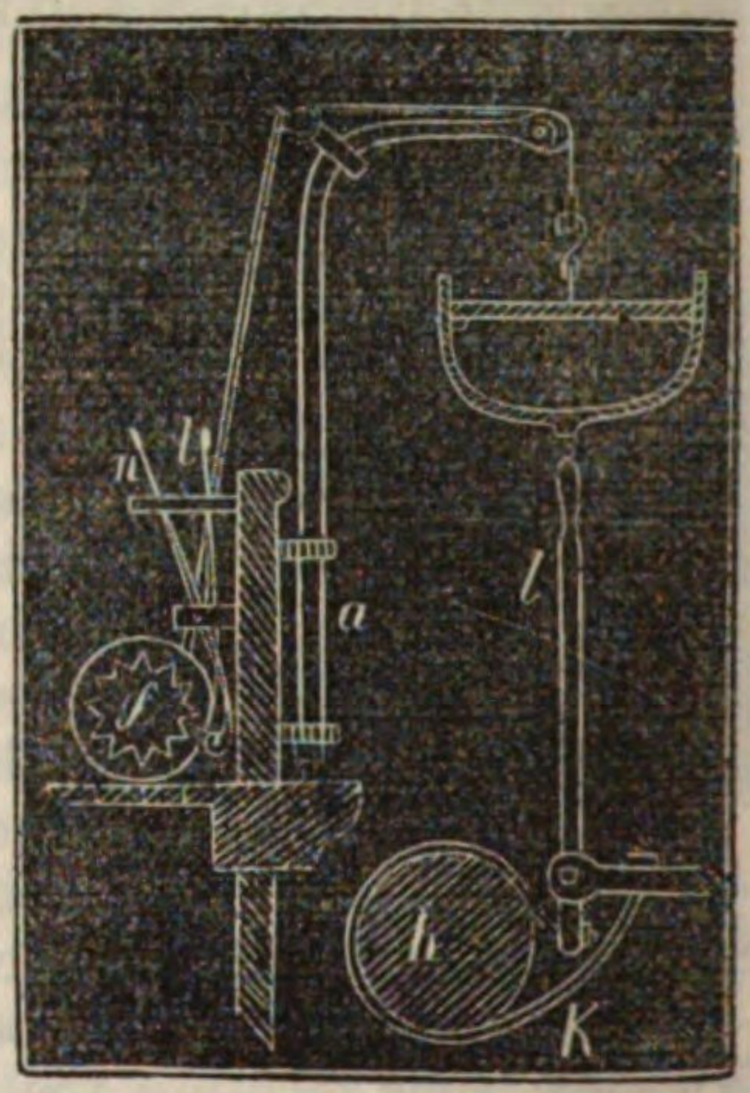
No. 9,593.—Alpheus Kimball, of Fitchburg, Mass.—*Improvement in Scythe Fastenings.*—Patented February 22d, 1853.



This invention consists of a small metallic plate (with two or more openings for the claw of the scythe) fastened on to the snath near the end of it: the snath being first made flat upon one side in a suitable manner; and of a ring with an opening at the end of the snath to admit the shank. The ring, which is also attached to the snath by screws, has a projection on the lower part of it with a screw in it, which may, by means of a wrench, be raised or lowered. When the claw of the scythe is introduced, the screw is raised against the lower side of the shank, and this secures it in a substantial manner.

Claim.—The method of securing the blade of the scythe to the snath, by passing the shank of the scyth through the end of the stationary metal cap B, and securing it by means of the upward pressure of the screw K, in combination with the claw *r*, and bush piece *m*.

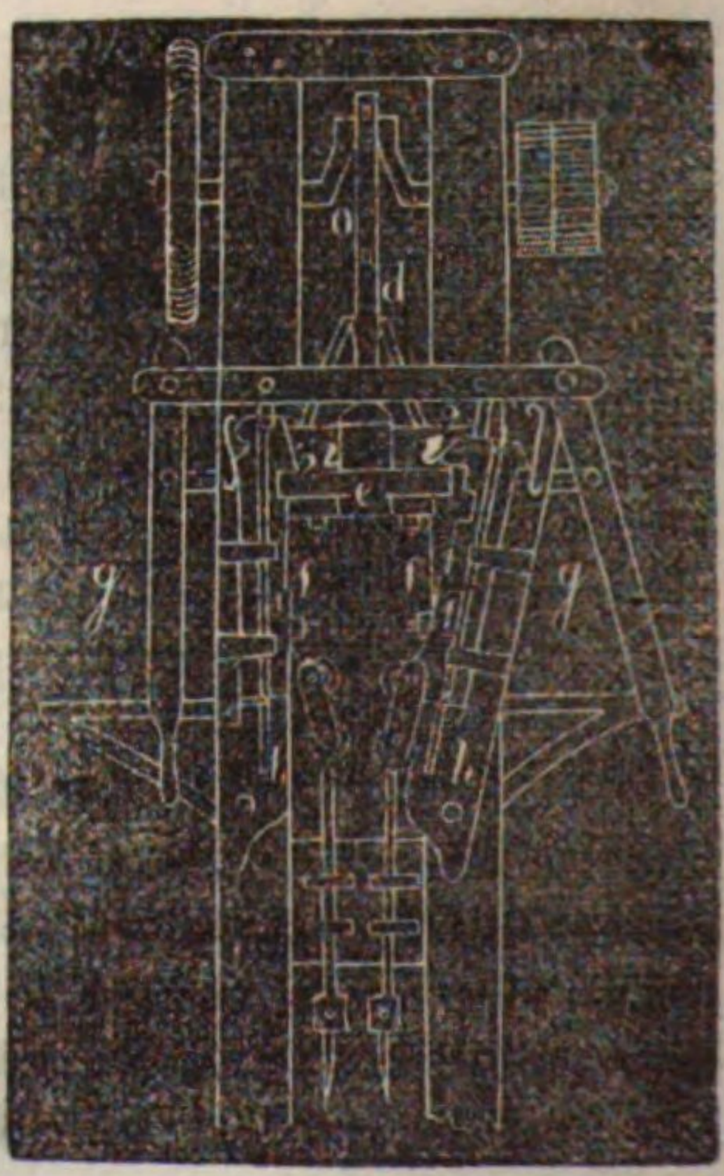
No. 9,594.—William Sterling Lacon, Yarmouth, Eng.—*Improvement in Suspending, Lowering, and Liberating Ships' Boats.*—Patented February 22d, 1853.



The object of this invention is to suspend ships' boats at the sides or stern of the vessel, that, in case of any sudden emergency, they may be readily lowered and put to sea without the risk of the tackles which connect the boats to the ship retarding the operations of lowering and floating them clear of the ship. In lowering the boat the lever *l* is first pulled forward (see fig.), in order to make the friction strap *k* retain its hold of the friction pully *h*, and thus prevent the premature revolution of the shaft *f*; on loosening the friction strap *k*, the boat will descend; and by means of this strap the boat can be prevented running down too fast.

Claim.—Suspending ships' boats by having the chains or ropes so connected with drums or barrels, that the two ends of the boat shall descend together, and with equal or nearly equal velocity; and so that the chains or ropes shall be free to disengage themselves from the barrels; in combination with the mode of controlling the turning of the barrels by the weight of the boat.

No. 9,595.—James Moreland, of Adrian, Mich.—*Improvement in Mortising Machines.*—Patented February 22d, 1853.



The pitman rod *d* (see fig.) is made to extend down, and is jointed to a noddle iron *c*. The pitman has a strap, *o*, extending down from the upper part, by means of which it can be elongated, whereby the chisels can be used for several inches longer before they are worn down and must be removed: below the point *o*, the pitman divides into three branches. The cross-heads slide up and down on V-shaped ways *f f*. It has a bar *e* across its front; to this bar the slides working the chisels are connected; on either side is a guide frame *h*; *i* is a projection at the upper end of the slide, which causes the slide to move to a certain point.

Claim.—The combination of the cross bar *e* on the cross head, with the projecting

dog i^2 on the movable way, for the purpose of withdrawing the chisel from the wood, on the back motion of the cross head.

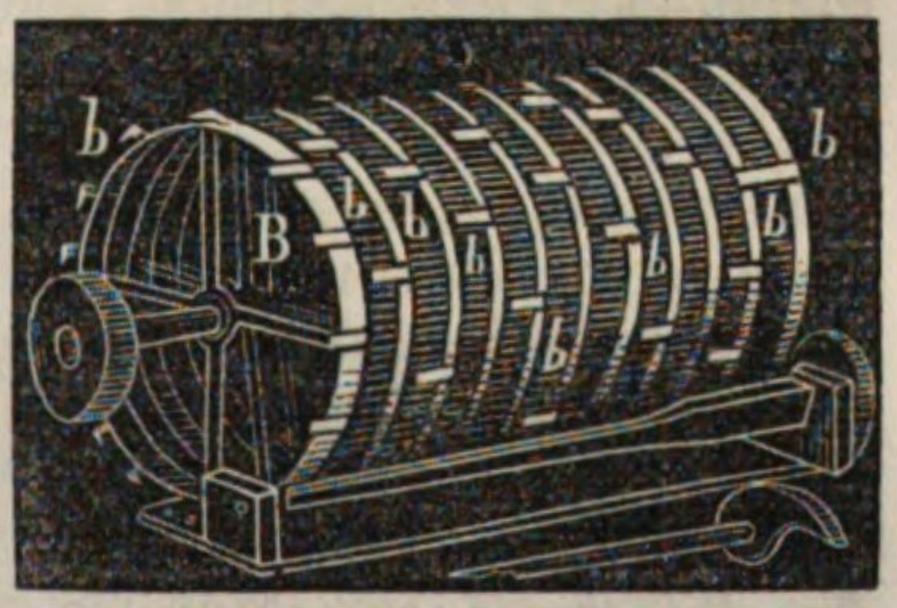
No. 9,596.—Amos B. Taylor, of Mystic, Conn., and Stephen Wilcox, Jr., of Westerly, R. I.—*Improvement in "Let-off and Take-up" motions for Looms.*—Patented February 22d, 1853.

The object of this improvement is to keep the warp and cloth at a uniform tension, and make the cloth of even thickness.

Claim.—Effecting and regulating the let-off motion, by the variable counterpoise lever in combination with the sliding-worm pinion, when the worm pinion is acted on by the yarn-beam through a direct strain communicated to it by the tension of the warp; the whole arranged and combined in the manner specified.

No. 9,597.—Lauren Ward (*Admr. of Richard Ward, dec.*), Jerome B. Hubbell, and Hart C. Hubbell, all of Naugatuck, Conn.—*Improvement in Machinery for Turning Irregular forms.*—Patented February 22d, 1853.

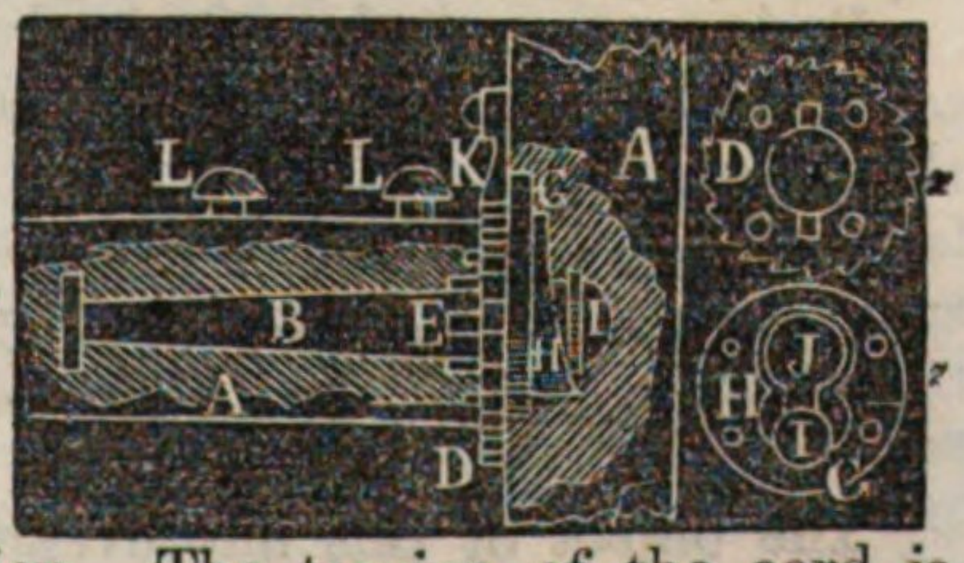
The cutter wheel B is made of a series of separate metal rings, and secured on a shaft; the cutters *b*, *b*, *b*, *b*, are attached to the periphery of the circle, and are adjustable. The pattern developed on the surface of the wheel will be the reverse of the pattern to be turned.



Claim.—The use of a cutter wheel for turning irregular forms, the cutters being so arranged that the pattern may be disclosed in reverse on its surface, when combined with the feed-motion, so that in turning the cutter wheel the desired irregular shape will be given to the article, without using guides or patterns; when the whole is constructed, arranged, combined, and made to operate substantially as herein described.

No. 9,598.—A. N. and A. Case, of Gustavus, Ohio.—*Improvement in Bedstead Fastenings.*—Patented March 1st, 1853.

The posts and rails of the bedstead are secured together by fastenings as represented in fig. *y*, A representing the rail, A′ the post, and B the tenon; on the end of the rail is screwed the ratchet D (fig. *x*). Any degree of tension (says the inventor) can be given the cord, by turning the side or end rails A in the proper direction. The tension of the cord is retained by the pawl K. When the bedstead is disjointed, the rails



are raised so as to allow the head of the tenon to be withdrawn through the hole J of the piece G (see fig. *z*), and fastened into the post A.

Claim.—The combination of the inclined plane H and head J with the pawl and ratchet D and K, for the purpose of fastening bedsteads and tightening the cord.

No. 9,599.—AUGUSTUS C. HARIG, of Louisville, Ky.—*Improvement in Swivel-Nibbed Keys for Door-Locks.*—Patented March 1st, 1853.

The object of this invention is the arrangement and construction of the key in such a manner as that the key proper by which the lock bit is moved is not presented on the outside of the lock, and consequently no opportunity is afforded for the application of pick-lock instruments to outsiders.

Figure 1, side view of the key, with shaft and bits *e* and *d*.

Figure 2, side view of the main bit *c*, and guard bit *d*, with the latter revolved half round on its axis or tenon, and showing the position of the grooves in the latter for the reception of the annular collar.

Figure 3, transverse section through the main bit, safety guard partially revolved.

Claim.—The guard-nib *d*, attached to the swivel-nib, in combination with the ordinary bit and shank of the key.

No. 9,600.—JAMES MCKAY, of Philadelphia, Pa.—*Improvement in Rotary Steam Engines.*—Patented March 1st, 1853.

This improvement consists in having the exhaust passages for the steam entirely encircling the cylinder, so that it is kept hot by the exhaust steam. Also, in having additional exhaust passages which act in conjunction with the usual exhaust passages. Also, in the combination of the sliding pistons, and self-adjusting valves and steam ways, which admit the steam behind the piston, to act as a spring to press the piston into the steam space. Also, in having the two cylinders in radial axial journals, arranged at right angles, so that the cylinders accommodate themselves to each other.

The above description substantially sets forth the claims of the inventor.

No. 9,601.—JONAS SIMMONS, of Cohoes, N. Y.—*Improved Machine for making Axes.*—Patented March 1st, 1853.

The object of this improvement is to accomplish the most difficult part of the process by machinery at one operation. A bar of iron is forged (of the shape shown by figure 1) of the proper width for

the axe, but somewhat thicker than would be necessary if the work was to be completed under the hammer.

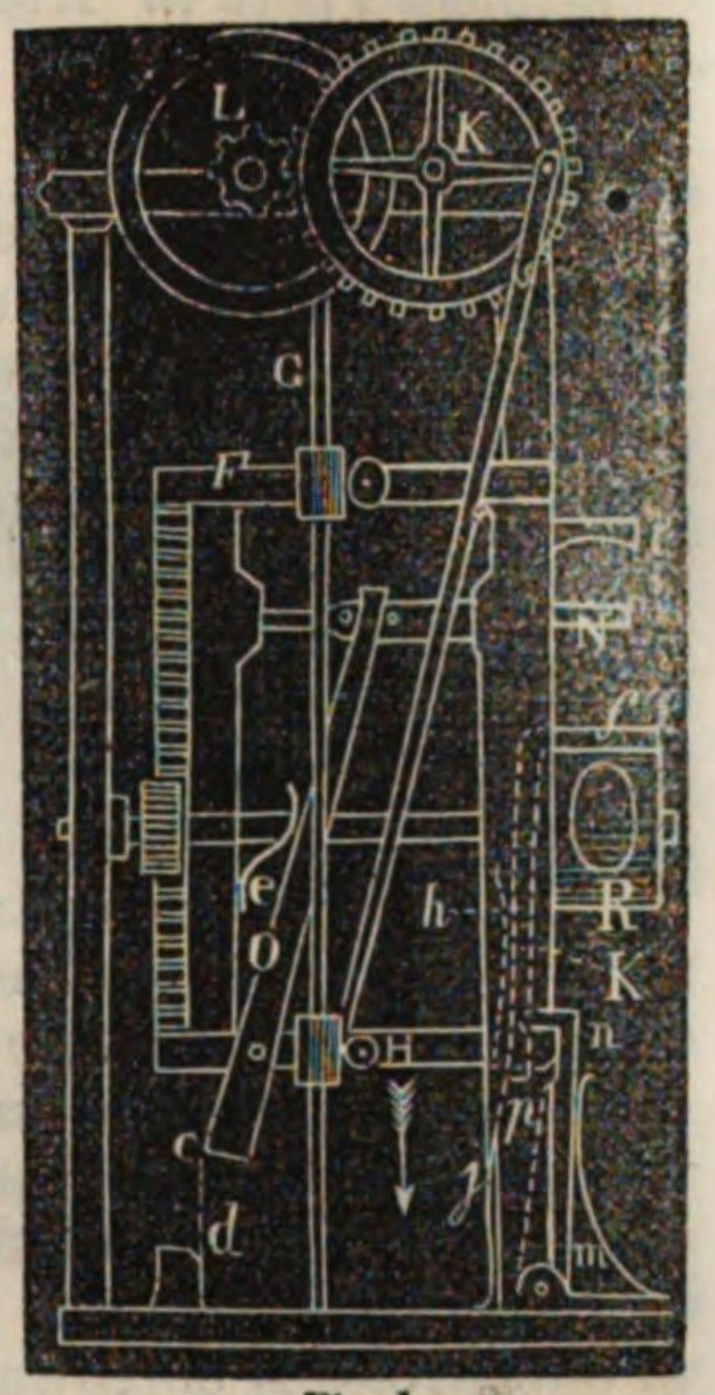


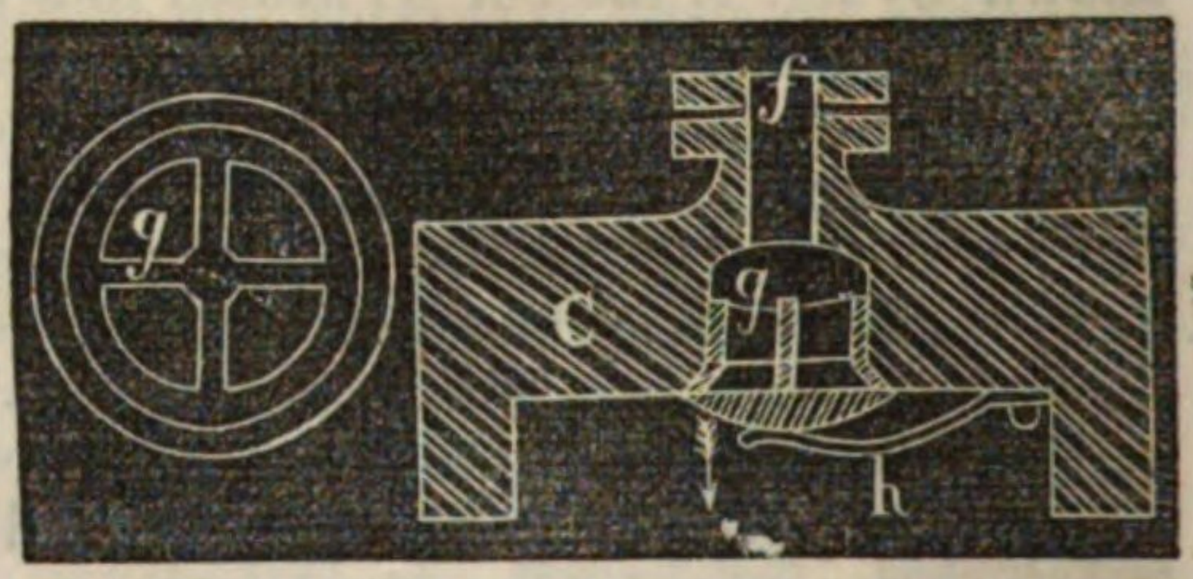
Fig. 1.

The rolls being placed in the position shown by fig. 2, the bar *p'*, heated to a welding heat, is laid on the rolls, with its centre supported by the rest-bar *f*, with the eye-bar N lying above it. The machine being now put into operation, the frame F (fig. 1) moves downwards, turning the rolls inwardly towards each other: the bars *f* and N carrying down between them the bar, the iron closing around the eye bar (as shown in fig. 2, No. 2), and having its edges kept separate by the scarfing bar *r*. As the frame progresses downward, the bottom *c* of lever o tripping against the stop *d*, draws the eye bar out from the eye of the axe (as shown in No. 4), when the axe falls from the rest bar, just as the frame F ceases to move downward. The motion of the frame is now reversed, and it goes upward until the rest bar *f* has reached its position again. Whe the frame reaches this point, the detent , which has been kept back by the press e of the lower extremity of the frame at *p*, drops into its notch in *h* and holds the rest bar *f* still, whilst the eye bar N goes up with the frame and then descends with the frame again. The object in permitting the eye bar to move up whilst the rest bar stands still, is to allow time and space to lay a fresh axe bar in place of the one just made into an axe. As soon as the frame descends low enough to bring the bars into position, in which they grip the axe bar as in a vice between them, the lower point of the frame *f*, pressing at *r*, throws the detent *m* out of the notch at *n*, when the spring *j* forces the bar *h* forward with the stops K K into the side necks *t t*, so that the frame in its further downward course carries the rest bar and eye bar down together with the axe bar between them through the rolls, till the axe is dropped from the rest bar. As the lever o ascends with the frame F, and its lower extremity is released from the stop *d*, the spring *e* forces the eye bar out for service.

Fig. 2.

Claim.—The arrangement of the several devices above mentioned for making axes, viz., rolling dies, with a rest-bar to support the ironwhilst being rolled, and an eye-bar, arranged not only to serve as a mandrel to shape the eye of the axe, but with the rest bar to hold the iron firmly during the process of rolling, the rest bar and eye bar being connected with the machinery to give them appropriate movements to cause them to co-operate with the rolls in shaping the axe, and these parts further in combination with a *scarfing-bar* for the purpose of shaping the blades to receive the steel point, in order to complete the axe.

No. 9,602.—Charles A. Spring, of Kensington, Pa.—*Improved Supplement Valve in Reciprocating Steam Engines.*—Patented March 1st, 1853.



The object of this improvement is to equalize the pressure of the steam in the cylinder and boiler, and protect the engine against strains, and insure a more equable motion, &c. *g* (see fig.) is the valve which opens towards the cylinder (see arrow), in such position in the steam boiler lid, that it will open by the pressure of the steam in the boiler, to permit the steam to pass from the latter into the cylinder; but whenever the pressure on the side next the cylinder becomes greatest, and steam begins to return to the boiler, then this valve *g* will close, and arrest the reflux, so that whatever force is exerted in compressing the steam in the cylinder before the piston, as it approaches the end of the stroke, will be given out again on the return of the piston, to aid in accelerating its motion; so that the force required to arrest the momentum of the moving parts at one stroke is borrowed from that stroke and added to the next.

Claim.—The arrangement of a valve in the lid of the steam chest, between the cylinder of a steam engine and the boiler, in such a manner that it will prevent the reflux of the lead-steam, by closing whenever the pressure of the steam in the engine exceeds that in the boiler, and opening again whenever the pressure in the boiler is greater.

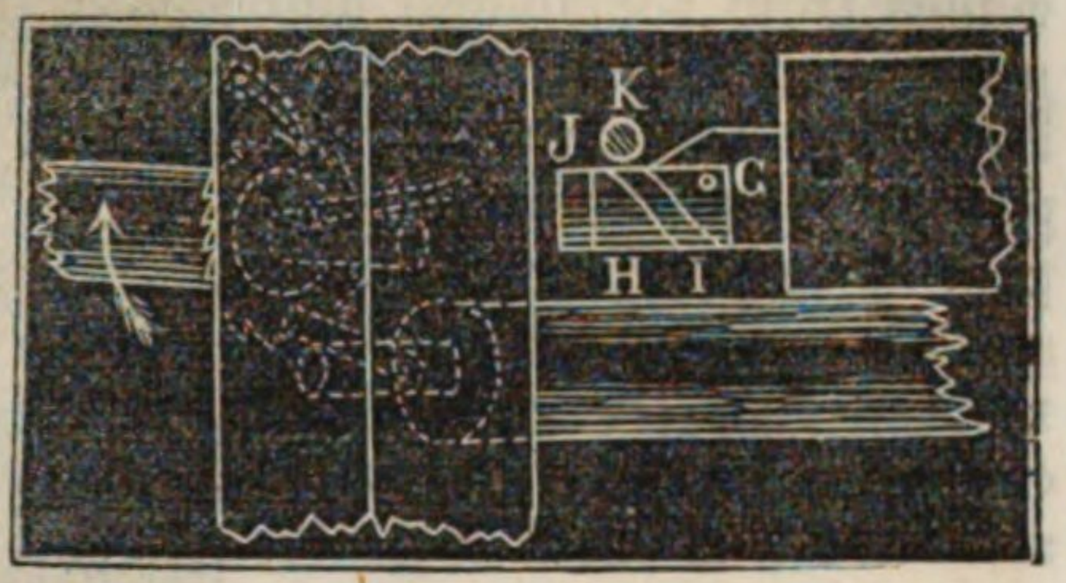
No. 9,603.—William Townshend, of Hinsdale, Mass.—*Improvement in the Construction of Looms.*—Patented March 1st, 1853.

This improvement consists in an arrangement "whereby the harness and treadles are moved with greater certainty in all kinds of figured weaving, and with less machinery than heretofore employed; also the picking motion for throwing the shuttles is simplified, the warp is allowed to be drawn off the yarn-beam with more certainty and regularity, and the take-up motion for the cloth is more effective, simple, and cheap. The selvages of the cloth are formed by a peculiar arrangement of levers to work the sheds of the warp."

Claim.—The cam wheel on the chain shaft, right angle lever, and staples or side bolts combined and acting as described, to bring the picking motion into operation alternately on each side by the backward motion of the lay. Also, actuating the picker-staff by the lay, on its backward motion, by means of the vibrating studs, when combined with levers attached to the swords of the lay and the bent levers, the whole arranged and combined. Also, the levers connected together by the adjustable pin, so as to give greater or less motion to the selvage warp, when actuated by the cam. Also, the apron or straps connected to the bar, and kept to the cloth by the proper weight or power, so as to cause sufficient friction to wind the cloth on the

cloth-beam, when said apron and bar are moved or actuated from the lay, or otherwise, so as to produce the effect.

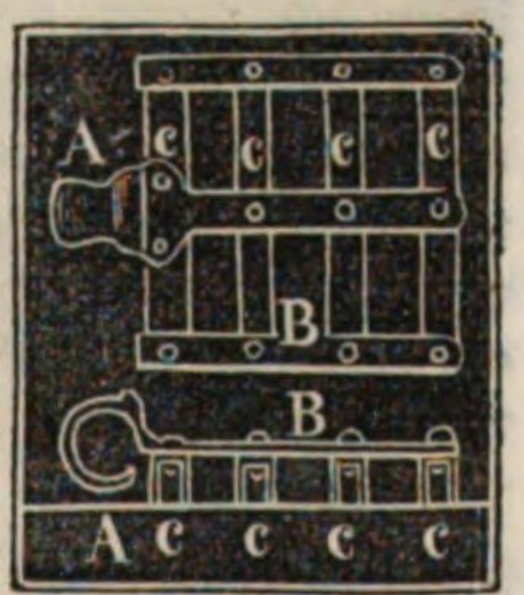
No. 9,604.—E. SUMNER TAYLOR, of Cleveland, Ohio.—*Improvement in Bedstead Fastenings.*—Patented March 1st, 1853.



By reference to the figure, the claim will explain the operation and arrangement of this improvement.

Claim.—The combination of the pawl and ratchet with the spiral grooved section H I attached to the tenon G, arranged and applied as follows, to wit: the tenons of one side rail and one end rail being furnished with the plates having the spiral groove turning to the right and left, in the direction of the arrows, and making a tight joint with the post, the other side and end rails having on their tenons a groove passing around the tenon at right angles to the axis, and fitting the pins, so as, by having one side of the tenon on each end flattened, to enable it to pass the pin in order to allow it to enter the groove; when, by turning in either direction less than a complete revolution, the pin fitting into the groove prevents the posts and rails from separating; and by attaching the ratchets to the end of this side rail, and one end of the end-rail with the pawl attached to the posts, by tightening the cord the whole frame of the bedstead is held firmly together, by the combined action of all the parts described; one end-rail and one side-rail turning, as described, to tighten the cord, both being secured by the pawl and ratchet.

No. 9,605.—WILLIAM WHEELER, of Troy, N. Y.—*Improvement in the Construction of Curry-combs.*—Patented March 1st, 1853.



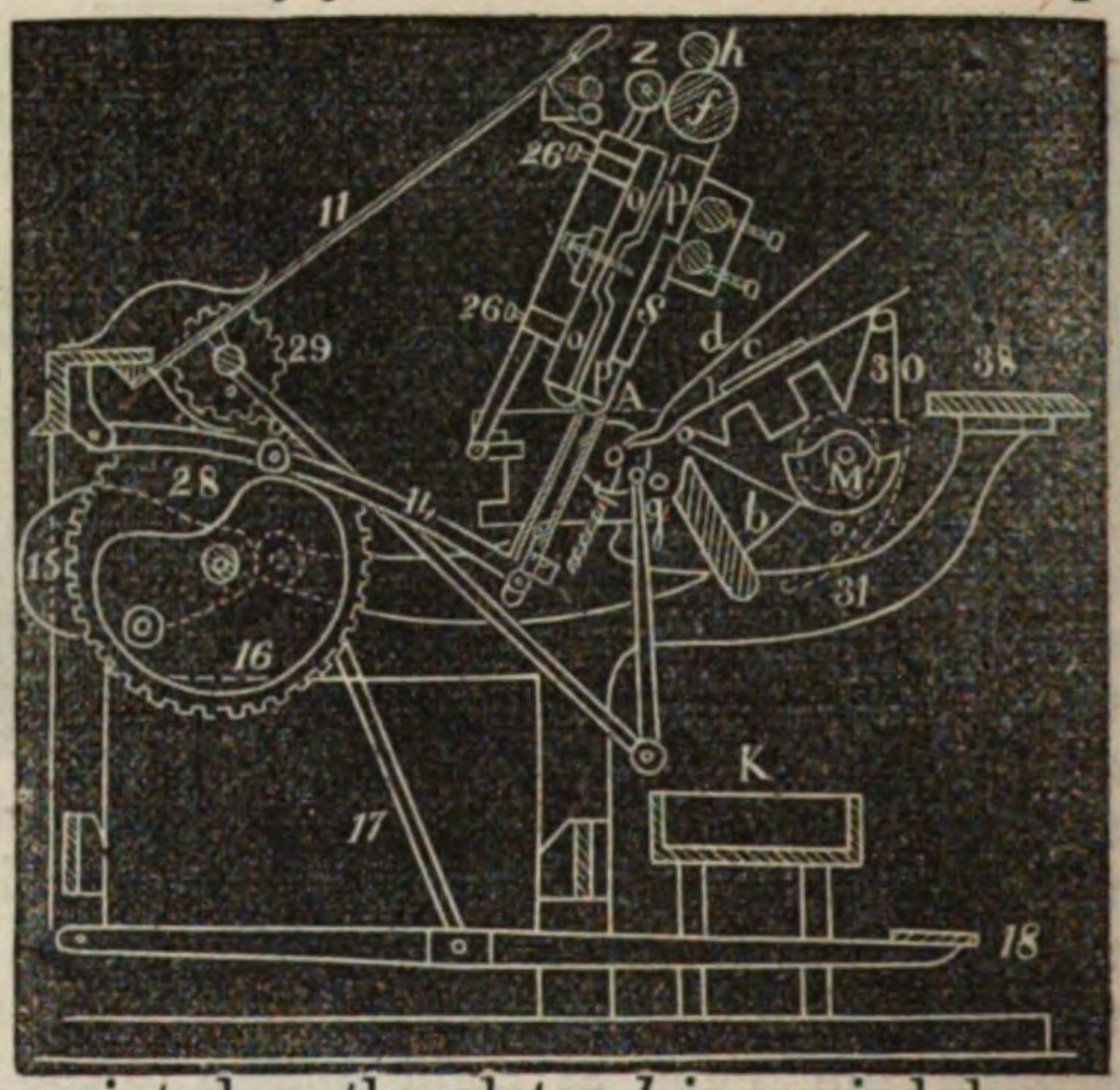
This improvement consists in substituting "thumb-loops" instead of handles as they have hitherto been made. The drawing represents a top view, and a side view.

Claim.—The application of a ring-loop, or fixture on curry-combs, for the insertion of the thumb as a guard and rest therefor, the ring or loop being made in one piece with the back strap.

No. 9,606.—SETH ADAMS, of Boston, Mass.—*Improvement in Printing Presses.*—Patented March 8th, 1853.

The figure represents a longitudinal section of the press. The pinion 29 on the fly-wheel shaft gives motion to wheel 28; on the shaft of which there are two impression-cams 15, 15, one of which is shown in the section. On the same shaft is fixed also cam 16 for moving the

inking rollers over the type. On the inking cylinder is placed the vibrating ink-distributing roller *h*, and the feed inking roller *z*. From roller *i* the ink is taken to ink rollers *g g*. These rolls are moved up and down over the type *s*. The rolls *g* give direction to the paper into box K, as it comes from the platen and passes between rollers *g*. 7 is a gauge, against which the paper is placed for the purpose of registering it. This guage is put upon a rod, and rests upon the platen *b*, during the time platen *b* is at rest and while *b* is going up to give the impression to the sheet; but when this platen returns to its place of rest, this gauge is caught by a catch, and held suspended till the paper which has been printed on the platen *b* is carried downward by the motion of the tympan-cloth to the two rollers *g*, when it is taken between them and carried to the box K. In order to carry the sheet down to the rolls *g*, the tympan-cloth 30 on the platen *b* is moved downward as follows, viz.: The tympan-cloth 30 is connected by belts to the segment *a* on shaft M. When the impression has been given and the platen *b* is returned to its place, the catch catches into a ratchet, thus turning shaft M and segment *a* and giving motion downward to the tympan-cloth 30, which carries the sheets with it to the "take-off" rolls *g*, between which rolls the sheet is taken and conveyed to box K. *c* is a gauge against which to put the paper to register it. This gauge is held to the platen *b* by a screw, and can be moved in the slot, to conform to different sized sheets, by turning the screw, and then moving the gauge as required. The chase in which the type is locked is keyed to bed *p* by a key; *s* is type, *p* the bed. The bed is screwed to the cross piece *o o*. In order to adjust the bed and give more or less impression, set screws 26, 26 are screwed into the cross pieces *o o*, the ends of which screws set back against the bed. 38 is a table on which to put the paper; it is screwed to each of the arms of the frame, 31. 18 is a treadle, 17 connecting rods which are attached to fly wheel and pulley by crank pins and treadle. 11 is a hand-lever for stopping the impression of the press. This lever has on it a fork, which fits into the groove on a clutch; said clutch is fitted to the driving shaft of pulley 29, with a spline to prevent it from turning on the shaft. When the lever is moved to the right, it disengages the clutch from a corresponding clutch or pinion 29, and leaves the pinion on driving shaft free or loose, so that the spur-gear and cams can stop.



Claim.—The combination of the vibrating platen with the sheet-holders arranged so as to be kept up a little distance from the platen, when in position to receive the sheet, and moving with said platen to

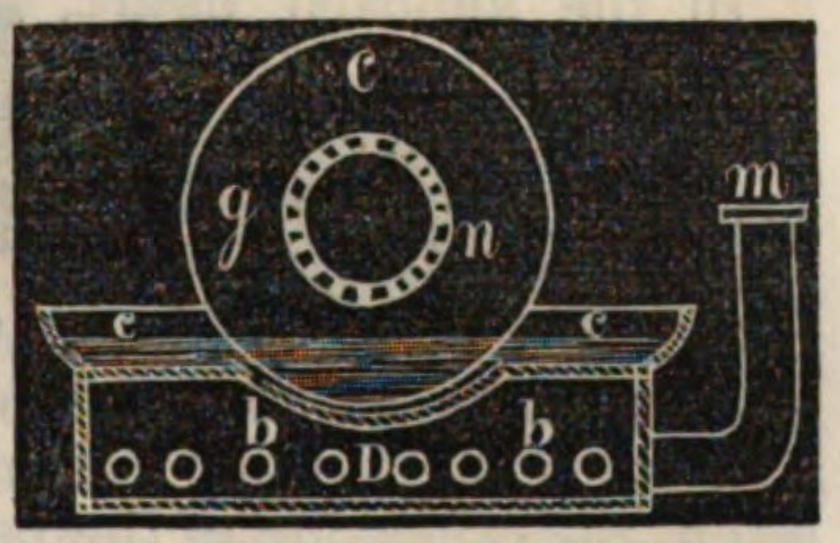
the form, in order to hold the sheets thereon, and draw them from the types; also the gauges for registering the sheets.

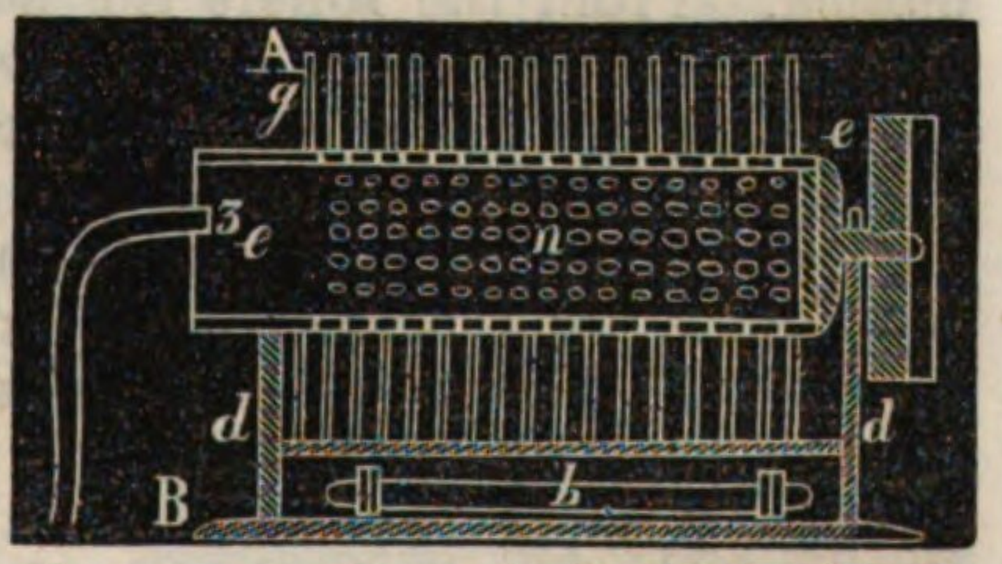
Also, the mode or means for keeping the sheet-holders up from the platen when the sheet is to be placed; said means consisting of an arm on each end of the rod (on which the holders are fixed, and with which they turn), and stops against which said arms strike.

Also, the apparatus for delivering or taking off the sheet from the platen after it is printed, consisting of the moving or sliding tympan-cloth, in combination with the turning segment *a*, to which an intermittent and reciprocating rotary motion is imparted by catch 47, and ratchet *e*, and spiral spring 48.

No. 9,607.—Henry Bessemer, of Baxter House, England.—*Improvement in Cane-Juice Evaporators.*—Patented March 8th, 1853.

This contrivance avails itself of the endless screw threads to carry along the liquid from end to end of the evaporator. The screw thread consists of a series of wide flat disks arranged helically around a hollow perforated shaft, and having its broad screw thread wings stand out nearly at right angles to the hollow shaft so as to form an extended surface for evaporation. The cylinder is arranged horizontally in its proper basin, and the lower portion of it dips into the heated liquid. The blast of air forced through the holes in the hollow shaft, rapidly carries off the vapor of the syrup at a temperature below the boiling point. (See figs.)





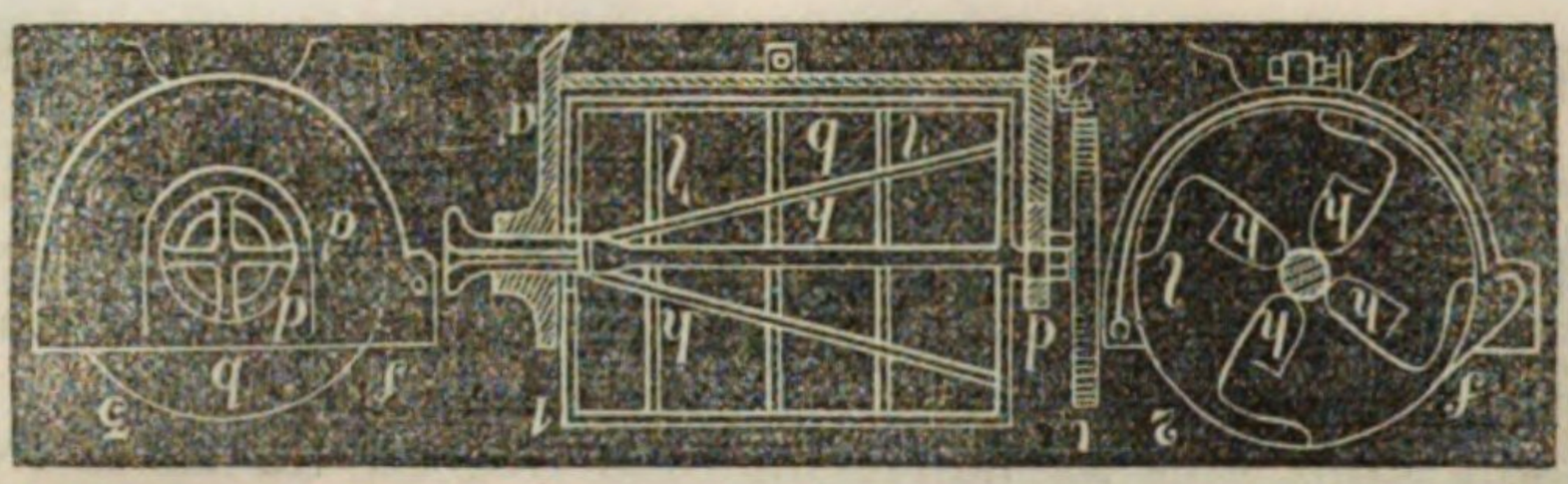
Claim.—The combination of a hollow and perforated shaft, connected with an air-blast apparatus, a series of plates or a screw plate (placed around and on the shaft), and a reservoir, trough, or basin, for holding the liquor to be evaporated.

Also, the combination of a hot-water vessel and its heating apparatus, the cistern for holding the saccharine liquor, and the apparatus for effecting its evaporation by means of hot air blown on thin or extended surfaces, a screw or plates as specified.

No. 9,608.—Henry Bessemer, of Baxter House, England.—*Improvement in Filters for Cane Juice.*—Patented March 8th, 1853.

This invention is confined to the drum which is immersed in the liquid to be filtered, and receives the same through its perforated periphery, and, by means of inclined scoops and troughs within, discharges it at its axis through its hollow construction. A scraper arranged on its upper part constantly clears and cleans the perforate periphery.

Claim.—The combination of the receiving vessel *a* (see fig.), the



rotary filtering drum (placed within the same vessel), the gutters *h* (within the drum), the hollow axle or shaft (connected with said gutters), and the scraper applied to the outer surface of the revolving drum; the whole being arranged and made to operate together.

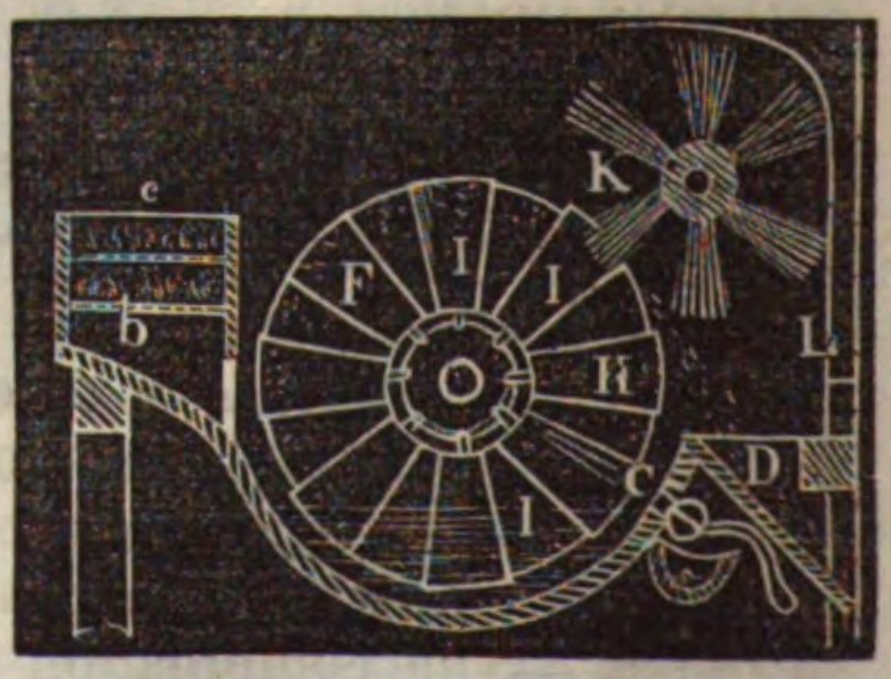
No. 9,609.—STILLMAN A. CLEMENS, of Springfield, Mass.—*Improvement in Machines for Dressing Flax.*—Patented March 8th, 1853.

In the annexed figure, the flax is placed upon the endless apron *b*, which presents it to the bite of feed rollers *d d*; it passes between the rests *m m*, to the beater *n*, composed of two flat faces with a space between. The beater is worked by a connecting rod and crank, to give it vibratory motion.

On the other side of the beater are another set of rests, *o o*, through which the fibres separated from the woody parts pass between the rollers *d' d'*; these are grooved, and the upper has also a longitudinal motion. From the rollers the article passes on to the endless belt *b*. Below the beater *n* is a fan blower surrounded by a casing; the spout *h* discharges the current of air between the faces of the beaters, to blow away the woody parts.

Claim.—The method of breaking and dressing flax, or other fibrous substances, by a beater (as described) vibrating on a central axis, between the faces of which the flax passes; combined with rests placed in close proximity to the edges of the beaters, between which the flax passes. Also, in combination with the beater and rest, the employment of a pair of rollers, each of which is grooved in the direction of its periphery, and one of which is made to vibrate in the direction of its axis, for the purpose of opening and softening the fibres.

No. 9,610.—SAMUEL GARDINER, Jr., of New York, N. Y.—*Improved Magnetic Machine for Washing and Separating Gold.*—Patented March 8th, 1853.

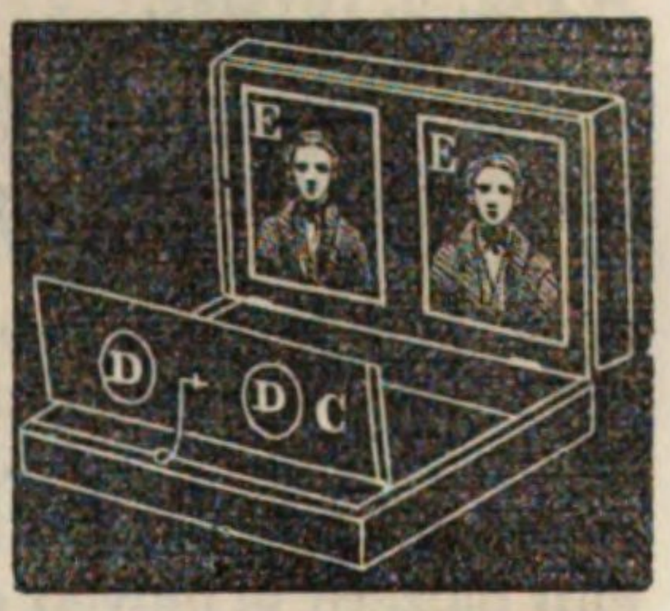


This invention is more particularly designed for the separation of gold from the black sand with which it is frequently found mixed in the beds of rivers; this sand contains oxide of iron, which is difficult to separate from gold by the operation of washing alone, owing to its great specific gravity.

The annexed figure represents a section of the machine. The gold is placed in the box *c* (mixed with the oxide of iron), and washed down in the trough, there to be separated from the iron, by means of the revolving magnets I I. The oxide is brushed off by the brush K, and thrown upon the inclined plane D. Outside of the opening C is placed a cylinder valve, which turns in suitable journal boxes, and has a slot of corresponding size with C. This cylinder valve has a handle, by which it is turned to regulate the width of the opening C.

Claim.—Separating gold or other metals from earthy or other magnetic particles, by means of a rotary cylinder of magnets F H, which magnets, at the same time they collect the magnetic particles, serve as agitators of the water and metal, &c.; the cylinder being constructed in relation to a trough B, substantially as set forth.

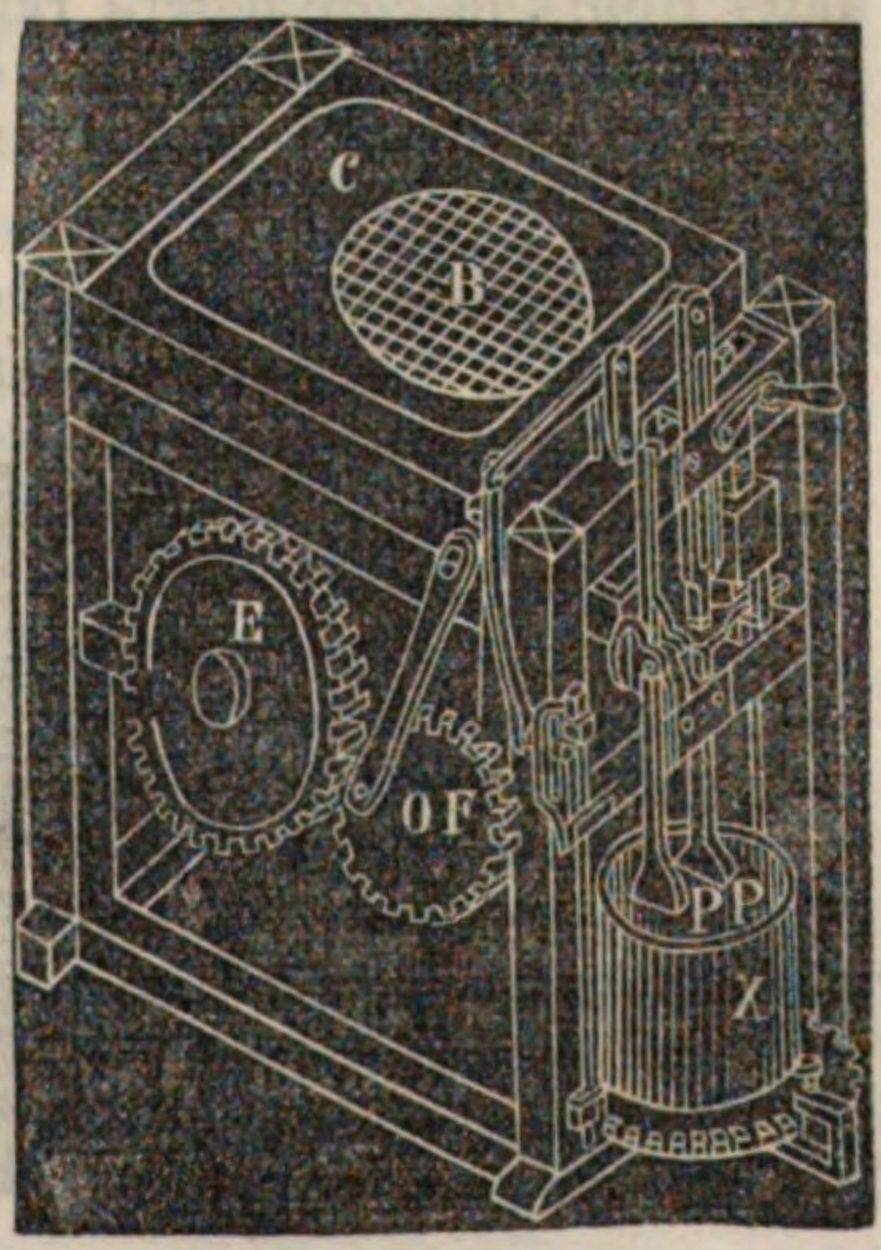
No. 9,611.—J. F. MASCHER, of Philadelphia, Pa.—*Improvement in Daguerreotype Cases.*—Patented March 8th, 1853.



The nature of this invention consists in constructing the case with an adjustable flap or supplementary lid, which is within the case, and having two ordinary lenses in it. A Daguerreotype is placed opposite each of the lenses, in the lid. By this arrangement a perfect stereoscope is obtained, and the Daguerreotypes, by binocular vision, are apparently formed into a solid figure like life.

Claim.—Constructing a Daguerreotype case with an adjustable flap or supplementary lid C, within the case, and having two ordinary lenses D D placed in it, by which, upon adjusting the flap or lid, a stereoscope is formed of the case; and the two Daguerreotypes E E, by binocular vision, are apparently formed into a life-like figure.

No. 9,612.—LYSANDER A. ORCUTT, of Albany, N. Y.—*Improvement in Machines for Moulding Hollow-Ware.*—Patented March 8th, 1853.



The nature of this invention consists in combining with a moulding machine, so constructed as to give the flask a continuous rotary or reciprocating rotary motion, under the rammers P P (see fig.), as the character of the work to be moulded may require. The rammers have both *vertical* and *horizontal* adjustment (the first being automatic, the latter at the will of the operator), and can be made to operate in any portion of the flask without stopping the machine.

Claim.—In combination with a flask,

having a continuous or reciprocating rotary motion, the rammer or rammers so arranged as to be made, at any time during their operation, to work in any portion of the flask; whilst at the same time they have an automatical adjustment, so as to rise in the flask as it is filled and rammed, and adjust themselves vertically in regard to the flask.

No. 9,613.—THADDEUS A. SMITH, of Albany, N. Y.—*Improvement in Moulding for Cast-iron Plates with dovetailed recesses.*—Patented March 8th, 1853.

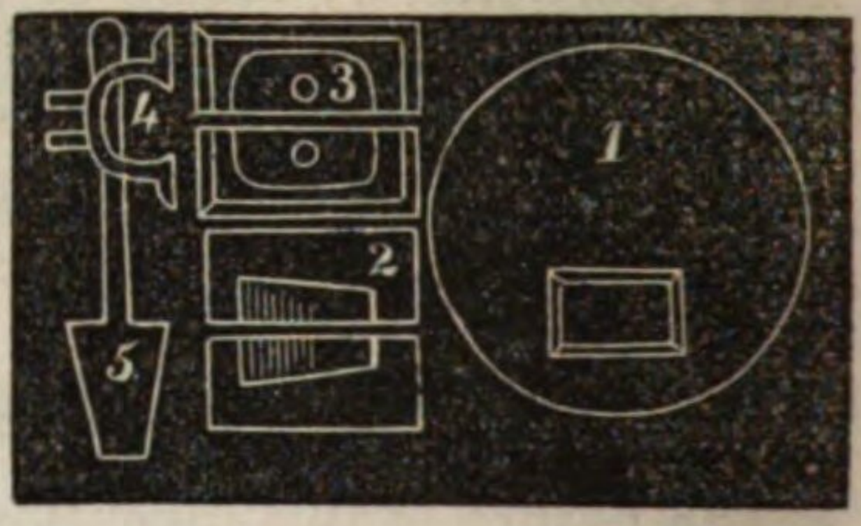


Figure 1 represents a pattern of a pot-hole cover, top upwards, with a square hole in it towards one edge, for the admission of the cup pattern, the sides of the hole being bevelled upwards.

Fig. 2, the cup pattern face upwards.

Fig. 3, reverse.

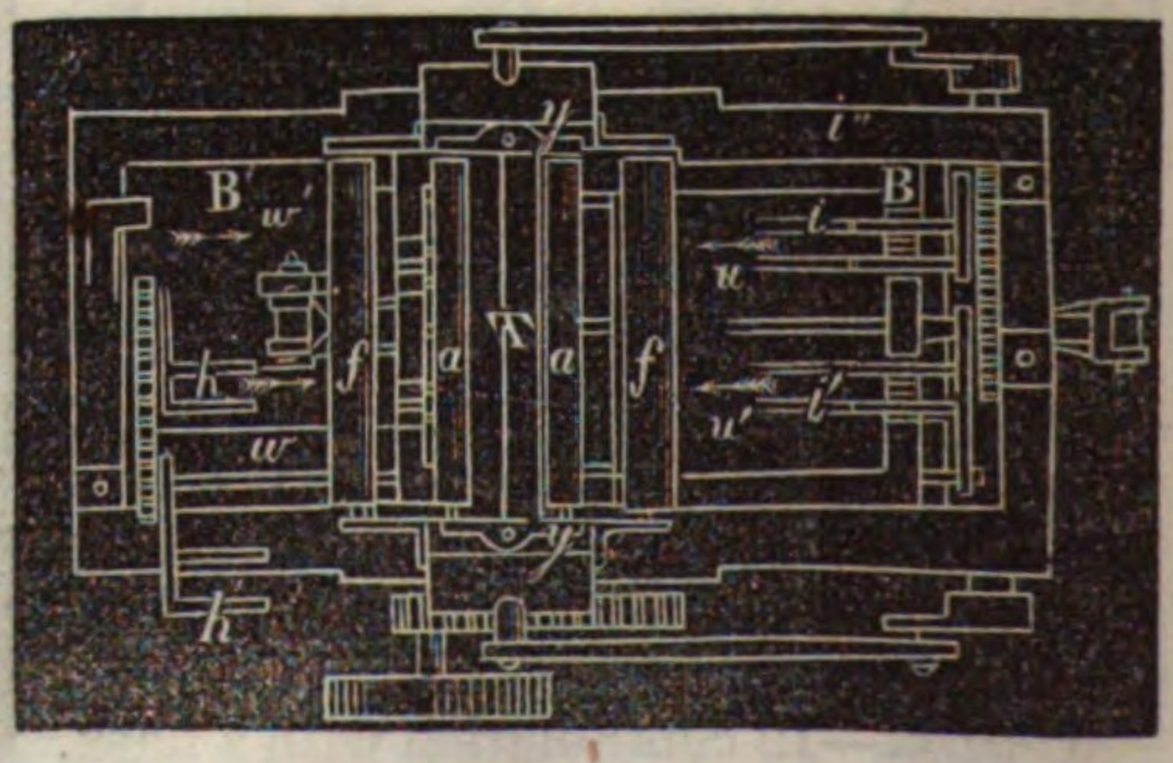
Fig. 4, cross section.

Fig. 5, lifter or handle.

In using the pattern-cup in moulding, the top pattern is laid down in the flask (with the cup in its place), with the upper face uppermost, and is then properly rammed up; then the flask and pattern are reversed in the usual way, and the under-side sanded and rammed up in the core; the core is then removed, and the cover pattern carefully taken off, leaving the cup pattern on the sand; then each half of the cup pattern is moved carefully to the right or left as the case may require, so as to have the dovetailed core of sand complete.

Claim.—The process of moulding the recesses in the tops of stove-plates, intended for the reception of the lifters (which recesses are required to be dovetailed), by employing pattern cups, shaped to form such recesses, divided by a vertical cut into two parts, so that the cups can be removed from the core, by moving each division of it horizontally from the core before raising it off the sand; and by fitting the cup patterns into the pattern of the stove plate, so that the plate pattern can be lifted from the sand, leaving the cup behind it.

No. 9,614.—JOEL TIFFANY, of Cleveland, Ohio.—*Improvement in Machines for Dressing Shingles.*—Patented March 8th, 1853.

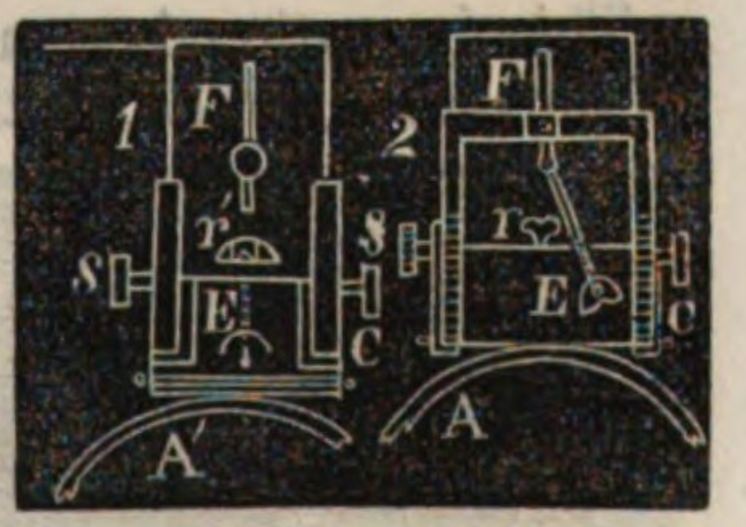


This machine operates in the following manner. After the shingles are rived out, they are first placed on the table beds *u u'* (see fig.), alternately as the table passes from one end of the frame to the other; the bed or table rises and falls by the action of cams, so that the knife in the cross head will not shave the shingle against the grain

in passing from B to B′; but as the table returns from B′ to B it is elevated, and thereby the shingle is shaved from butt to point, the points being always in the direction of the arrows. By the raising and lowering of the table, as described, the proper taper is given to the shingle. The knives are in the cross-head T, and always move in an adverse direction to the table. The shingles are shaved on one side at a time: the first side is shaved in the bed *u′;* they are then turned from the bed *u′* to *u*, and from *w′* to *w*. As the table passes from B to B′ the shingle passes in between the forks of the arms *k;* and the instant the table moves from B′ to B, the shingle is conveyed from the bed *w′* to *w*, the arms taking the place marked *h*, which was occupied by the arms *h′;* and at the instant the arms *h″* begin to pass to *h*, the arms *h′*, which then occupied the place *h*, pass to the position indicated at *h′*, which throws the shingle from the bed *w* to the floor, completed. The arms *i′* convey the shingles from the bed *u′* to *u*, and the arm *i* gives place to it, passing to the position *i″*, and at the same time taking a finished shingle with it from the bed *u′*. The rollers *a a* and *f f* are for the purpose of keeping the shingle in place when it is being shaved. The gear wheels are hung on journals. The springs *y y* are for the purpose of allowing the rollers to adjust easily to shingles of various thicknesses. The ends of the springs rest on the journal caps.

Claim.—The combination of parts consisting of the pinions *l l′* and *k k′*, with the intermediate gears *m m′;* the levers *n′* and joint levers *o* and *o′*, and sections *u″*, with the connecting rods *p* and *s*, and cam *o*, for the purpose of operating the arms *h h′*, *i i′*, as described.

No. 9,615.—JOHN A. WAGENER, of Charleston, S. C.—*Improved Cannon Sight.*—Patented March 8th, 1853.



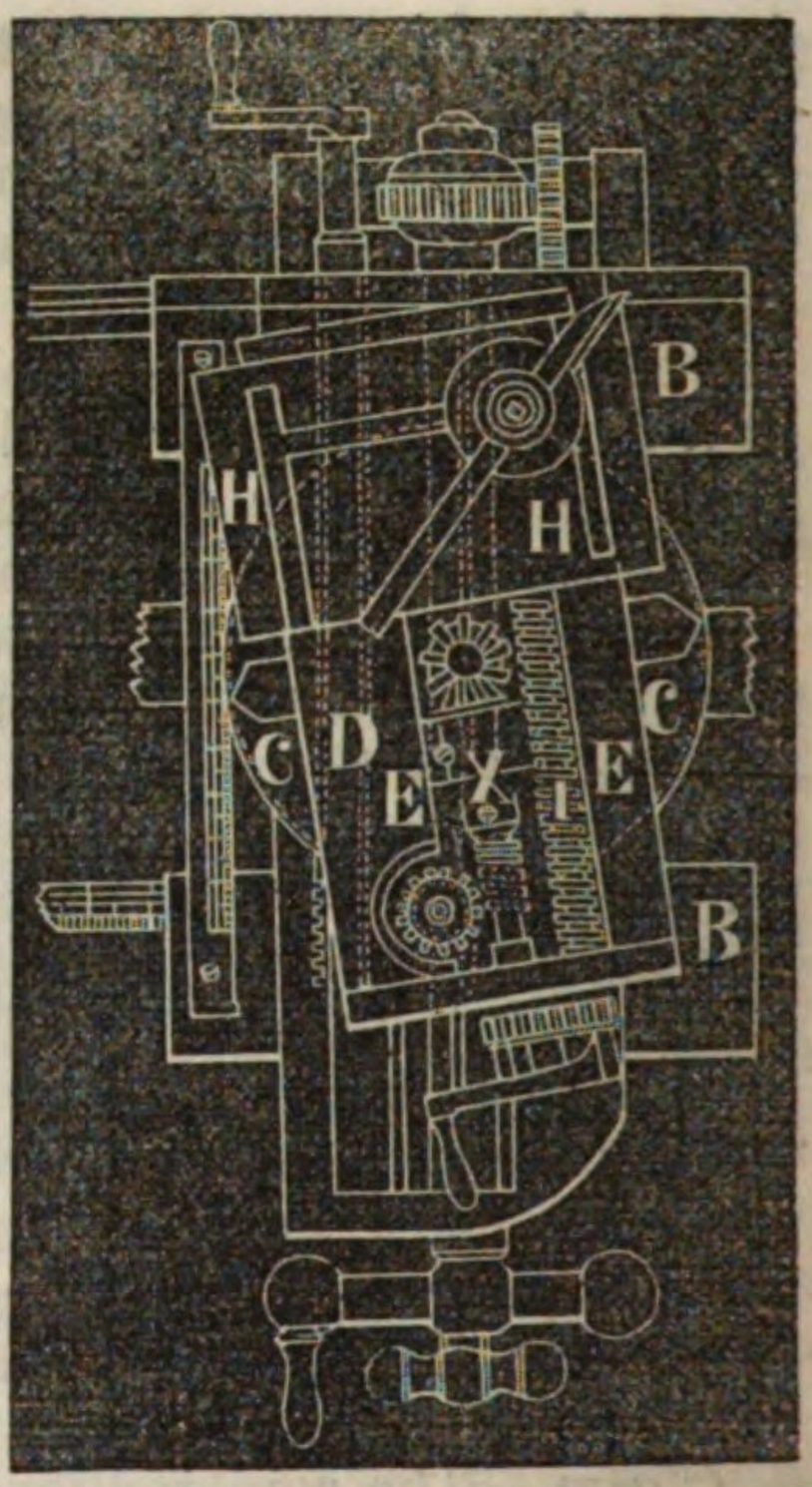
The nature of this invention consists of an "easy and correct" mode of determining the highest point of the surface of a cannon, regardless of any position the wheels may occupy upon the ground; and of affording the gunner at the same time a perfect sight to direct and elevate the piece by, capable of regulation for any distance less than point blank, as well as to extreme range, according to degrees.

Figure 1, front sight.

Figure 2, rear sight, attached by means of spring clasps to the cannon.

Claim.—The sighting apparatus, consisting of the corresponding pendula E, hung between the graduated side-pieces or uprights C C, in connexion with the protecting and regulating slide F, with its rifle sights *r r′;* the pendula having free sway, by means of the rotary mounting of the uprights, and upper part of the apparatus, on the screws and pivots *s s;* and the whole being attached and shifted into horizontal position on the cannon, by means of the movable spring clasps A A and A′ A′, all combined.

No. 9,616.—Warren Aldrich, of Lowell, Mass. — *Improvements in Turning Lathes.*—Patented March 15th, 1853.



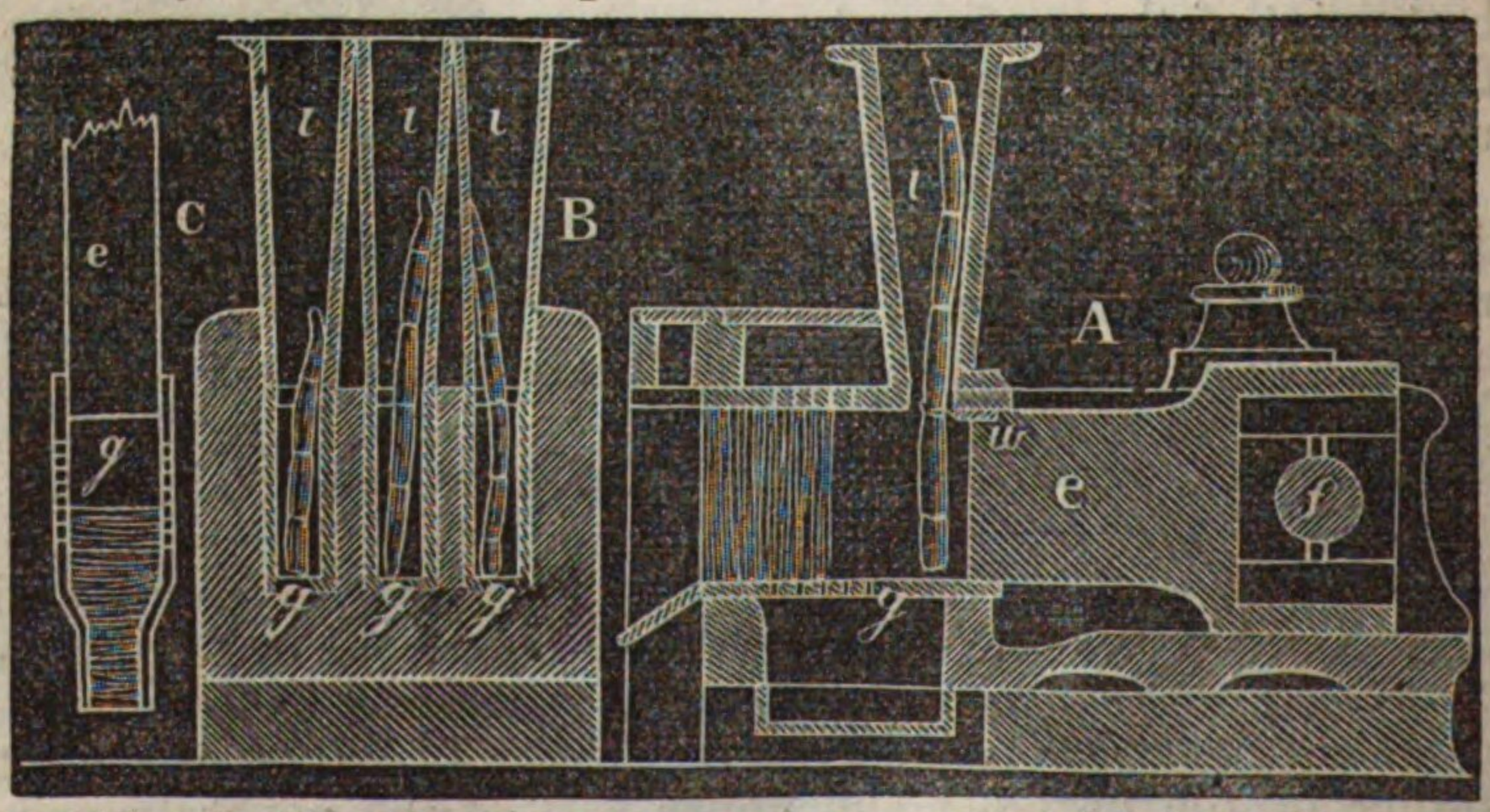
The object of this invention is to accurately turn a variety of forms, such as globes, ovals, &c. To effect this result the tool carriage H H is made susceptible of a variety of motions and adjustments. (See fig.) The letter E shows the tool carriage without the lathe; B B is a slide moving on the bed of the lathe, and sustaining the whole apparatus of the tool carriage; *c c* is a circular plate movable by a screw D, which is shown in dotted lines.

On the circular plate *c c* is placed a revolving slide E′; on this side is placed the tool carriage H H, which is moved by screw I, revolving worm shaft X, and revolving plate *c c.*

Claim.—The improvement which consists in giving an automatic motion to the upper slide or tool rest, when set at any angle to the bed-piece of the lathe, instead of moving it by hand; so as to turn with ease and accuracy solid or hollow cones, by means substantially of the screw I I′, revolving worm shaft X, and revolving plate *c c*, as above set forth.

No. 9,617.—Henry Bessemer, of Baxter House, England.—*Improvement in Sugar-Cane Presses.*—Patented March 15th, 1853.

This invention is a modification of that patented by the same inventor, May, 1851. In that patent the chamber for pressing is parallel

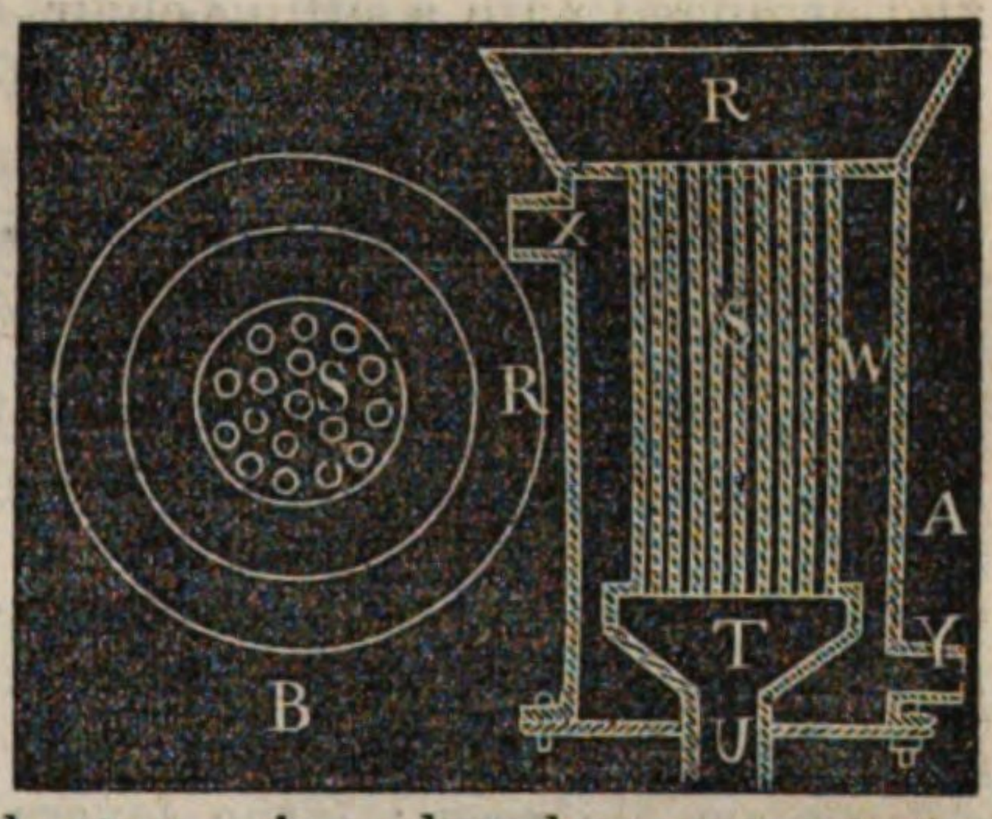


on its sides; but in the present case it is parallel for some distance, but contracted somewhat at the mouth, so as to wedge the cane in while the juice is being expressed. This change makes it unnecessary to

have as long a chamber, and so prevents a re-absorption of the juice once forced to the outer surface of the mass. This improvement also embraces the arrangement of devices for sustaining the parallelism of the motion of the pistons; *g g g* are tubes, having pistons *e*, as seen at A; *i i i* are hoppers; *w* is the cutter attached to the piston *e*.

Claim.—The improvement in the construction of the cane-pressing tubes, with sides made parallel some distance, for the working of the piston against, and to approach one another towards the mouth of discharge of the pressed cane. Also, the combination of the compresses, or pressing tubes B C, and two conjoined pistons D E, with one revolving actuating shaft and its mechanism, to give to the plungers or pistons a *simultaneous* reciprocating rectilinear motion.

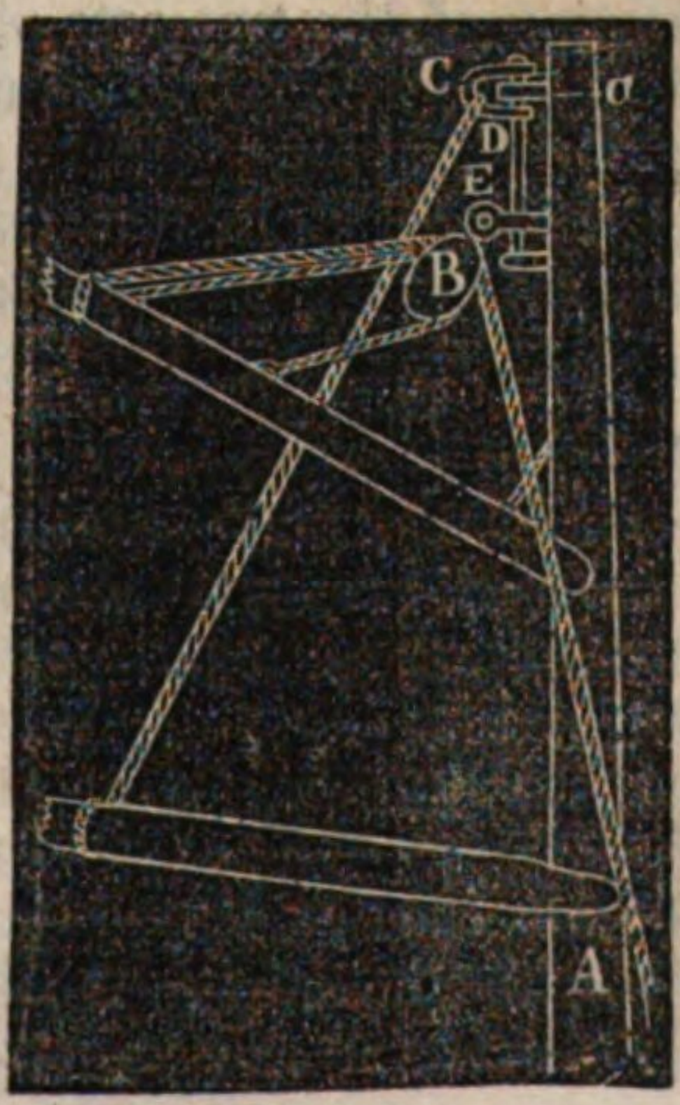
No. 9,618.—HENRY BESSEMER, of Baxter House, England.—"*Improved Heater*" *for Sugar Syrup.*—Patented March 15th, 1853.



This device is designed to heat the syrup discharged from the vacuum pan, just before it is poured to fill the moulds, and consists of a vertical drum of tubes, in a case acting as steam jacket; the syrup is poured by means of a hopper into the top, and, falling by gravity through the same, is heated by the steam which surrounds the tubes. Figure A is a vertical section, and B a plan of the apparatus; R is a copper heater open on the top, T is a chamber, U a spout; X is a steam pipe for admitting, and Y a pipe for passing the steam off.

Claim.—The above description substantially embraces the claim of the inventor.

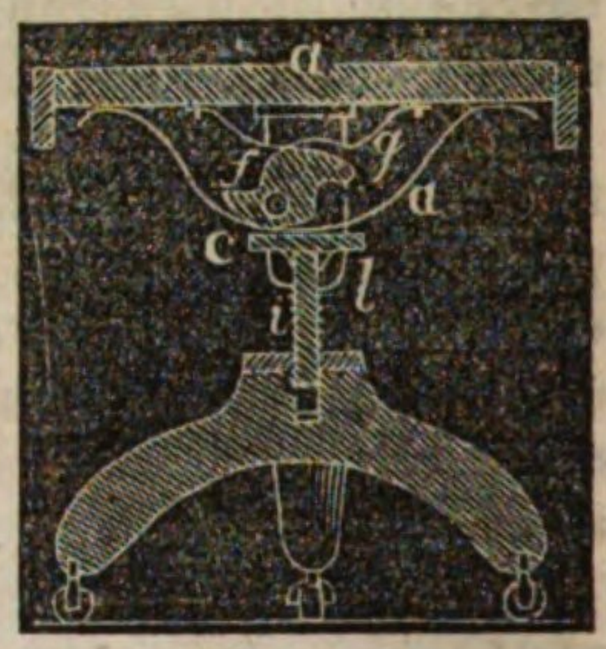
No. 9,619.—WILLIAM COLEMAN and STEPHEN G. COLEMAN, of Providence, R. I.—*Improvement in Supporting the Topping-Lift and the Peak-Halyard Block of Sail Vessels.*—Patented March 15th, 1853.



This invention relates to a mode of applying the topping-lift shackle and the peak-halyard block to the upper part of a mast. (See fig.) A represents the mast, B the peak-halyard block, and C the topping-lift shackle.

Claim.—Supporting the topping-lift by means of a crane, of such form and construction, that when the topping-lift sags (when the sail is hoisted), it shall not foul, or chafe against the peak-halyard block. Also, so arranging and constructing the crane, that it may also support the peak-halyard block.

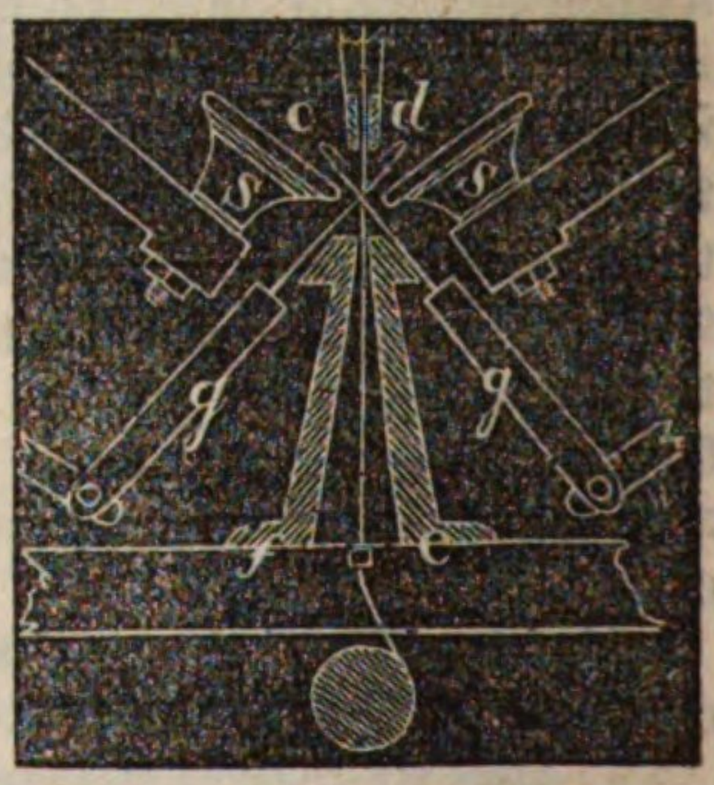
No. 9,620.—Peter Ten Eyck, of New York.—*Improvement in Rocking Chairs.*—Patented March 15th, 1853.



The nature of this invention consists in combining with a chair (so arranged that the top or seat shall rock upon the bottom part, while the legs remain stationary) a safety guard to prevent the chair from going back too far, and also to prevent it from going suddenly backward when a person seats himself in it. The bar *c* reaches across the chair, and works on pivots in projections *l*, permanently fixed to the chair; in the centre of bar *c* is a cam *f*, which works on a pivot, and rests against the spring *g*, for preventing the top part of the chair from rocking too suddenly.

Claim.—The guard or safety piece, and the spring *g*, combined and arranged with a sitting chair, so that the seat may rock upon the legs, or support, and as above set forth.

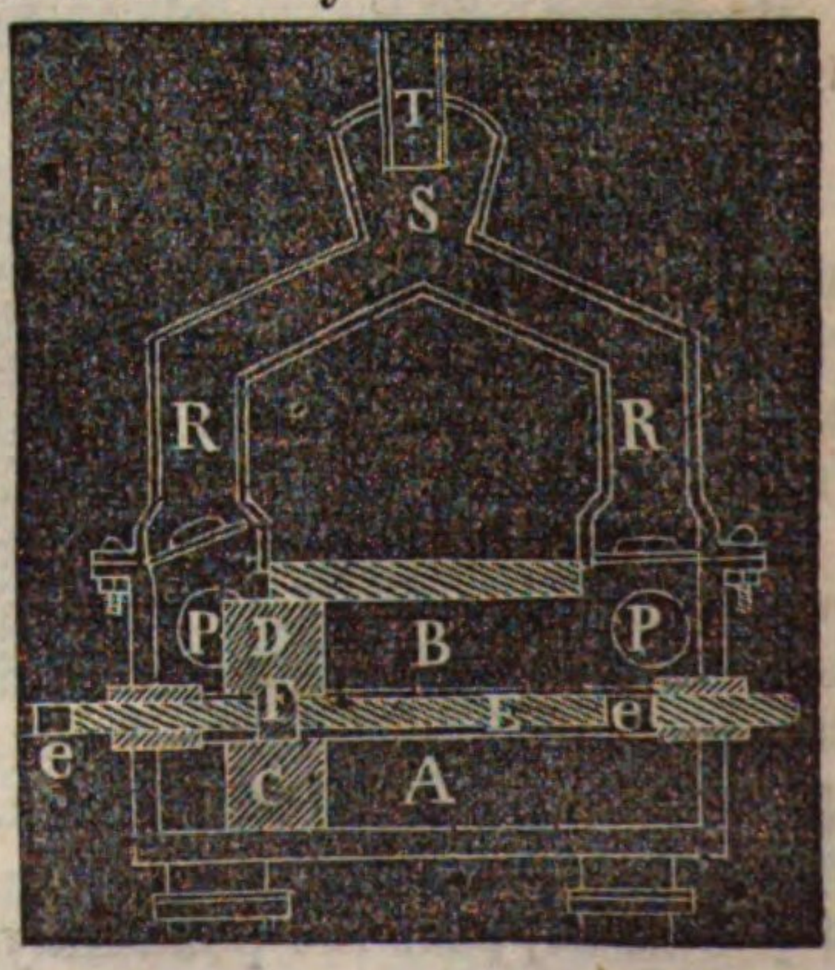
No. 9,621.—Moses Marshall, of Lowell, Mass.—*Improvement in Knitting Machines.*—Patented March 15th, 1853.



To fully illustrate this improvement would require extensive drawings and descriptions; therefore reference is made to the principal features of the invention only, with the claim.

In the figure, *c d* represents the needles; *e f* the needle rests; *g* the levers working the needles; and *s s* the rotary depressers.

Claim.—Connecting the rotary depressers and the feeder which carries the thread with the arm which connects the reciprocating cam boxes. Also, dividing the plates which support the needles, and cast the stitches, at the angle of intersection of the two sets of needles, so that the fabric knit may pass between them. Also, forming the stitches alternately on each side of the needle rests, by two sets of needles placed at an angle to each other, and operating one needle at a time.



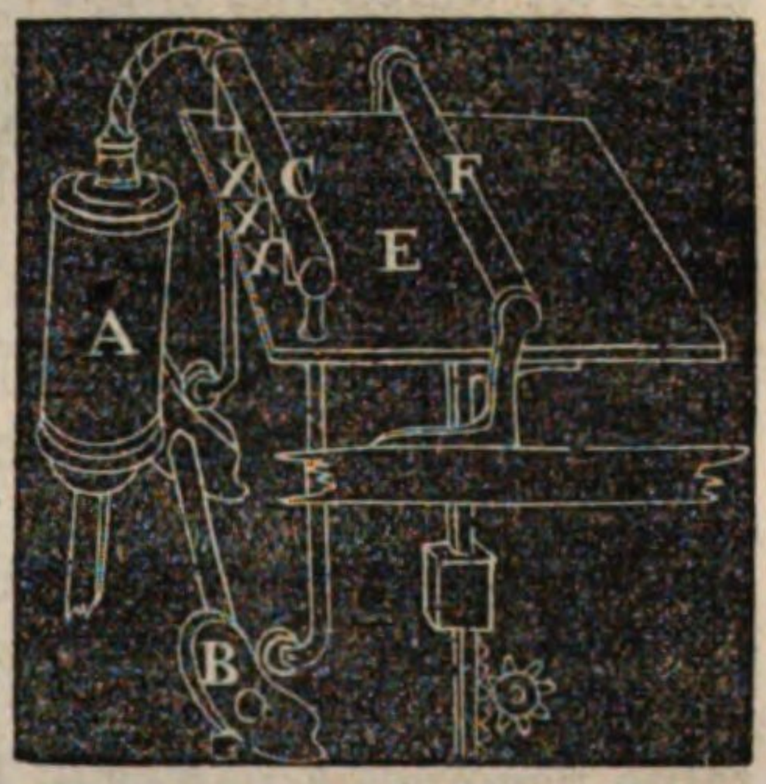
No. 9,622.—Horatio N. Black, of Philadelphia, Pa.—*Improvement in Hydraulic Steam Pumps.*—Patented March 22d, 1853.

The nature of this invention consists in placing at the juncture of a double cylinder A, B, a piston rod E, united to and carrying two pistons working, the one C, in the steam cylinder, and

the other D, in the water or pump cylinder; both pistons are united by a bar at F, which bar moves in grooves on each side of the rod. There are openings in the piston rod *e e*, and the juncture of the double cylinder, whereby at the proper time communication of the cylinders is effected; for the purpose of causing a small quantity of cold water to pass into the steam cylinder, and thereby effect the partial condensation of the exhaust steam in the cylinder itself. This improvement relates also to the combination of the double cylinder with the intermediate piston rod and connected or twin pistons, having a movement simultaneous with the piston rod.

Claim.—The combination of the double slotted water and steam cylinder A and B, double pistons C and D, and slotted piston rod E, arranged and operating as described, &c.

No. 9,623.—JOHN P. COMLY, of Dayton, Ohio.—*Improvement in the mode of Separating Paper by the single sheet.*—Patented March 22d, 1853.



This improvement consists in the method of feeding or supplying paper sheet by sheet from a heap, through the agency of atmospheric pressure, having reference especially to the instances in which the sheet has to be raised and drawn forward by one edge as in the case of printing, and is intended to supersede the services of the attendant, now found necessary to feed the machine. The principal features of this improvement are an exhaust pump A, attached by a flexible tube to a horizontal tube C, provided at the under side with small tubes x, x, x. The paper is placed upon the elevating table E, which presses the paper in its upward motion against the roller F. This runs out the top sheet of paper, which is sucked up by the exhaust tube C and x, x, x. By means of proper gearing, the paper is regularly fed and removed.

Claim.—The above description substantially embraces the claim of the inventor.

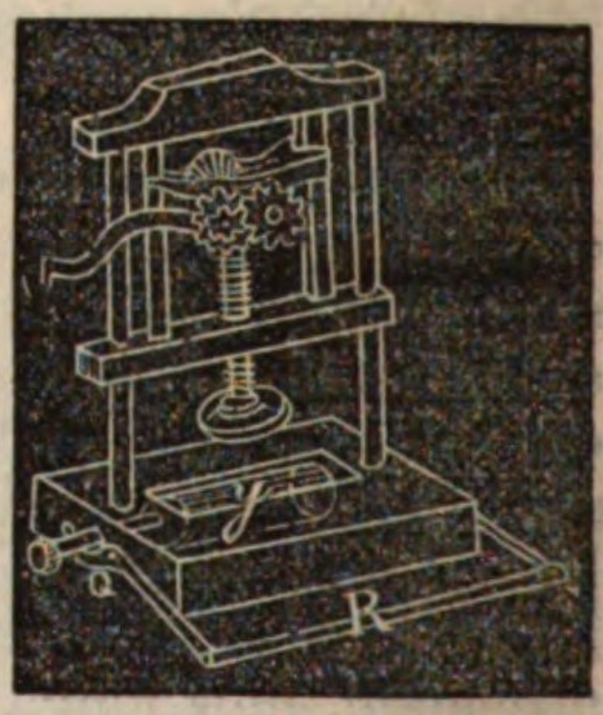
No. 9,624.—ROSWELL ENOS and BELA T. HUNT, of St. Charles, Ill.—*Improvement in the art of Tanning.*—Patented March 22d, 1853.

This mode of tanning consists, in the first place, of liming the hides in the usual way to remove the hair, and then placing them in cold water for one day (not subjecting them to the usual bating process); then working them twice on the grain; then placing them in liquor, made of 200 gallons of water, 200 lbs. of domestic sumach, 20 lbs. of salt, 30 lbs. of wheat bran, at the temperature of forty-five degrees: handle for ten or twelve hours on the first day. The second day liquor is added made of 30 lbs. of sumach, 36 lbs. of extract of hemlock bark, 20 lbs. of salt, and 30 lbs. of bran. Third day, handle four times. Fourth day, add to the liquor as on the second day,

and handle well; and so continue to strengthen every day until tanned, which will take from twelve to fourteen days. The inventors regard this process of tanning as superior to any other known mode.

Claim.—The process of tanning, with the use of lime, salt, bran, sumach, and cutch, or any other tanning in room of cutch, whereby we commence the tanning at the same time we commence reducing; as the salt and bran overpower the lime, the tan takes the place of the lime, and converts the hide into more perfect leather, and in less time, than in any other way. The claim is based upon the *application* of the materials, as set forth.

No. 9,625.—Mills A. Hackley, of Belleville, N. Y.—*Improved Cheese Press.*—Patented March 22d, 1853.



The frame R is to be used in turning the table on which the cheese is placed, and acts in connection with the roller *y*, so as to raise or depress it as may be required. This turn-table is constructed of iron and bent in a square form, as represented in the figure, and securely attached to the bed-piece by means of screws Q, upon which it works, and which forms its fulcrum. The extremities of the turn-table are sufficiently curved, so as to pass beneath the shaft upon which the roller *y* works; which shaft extends through the bed-piece, and projects on both sides, sufficiently to receive the bearings of the turn-table; thus the turn-table becomes a powerful lever, by means of which the roller is raised and the withdrawing of the cheese made easy, and its turning speedily and easily accomplished.

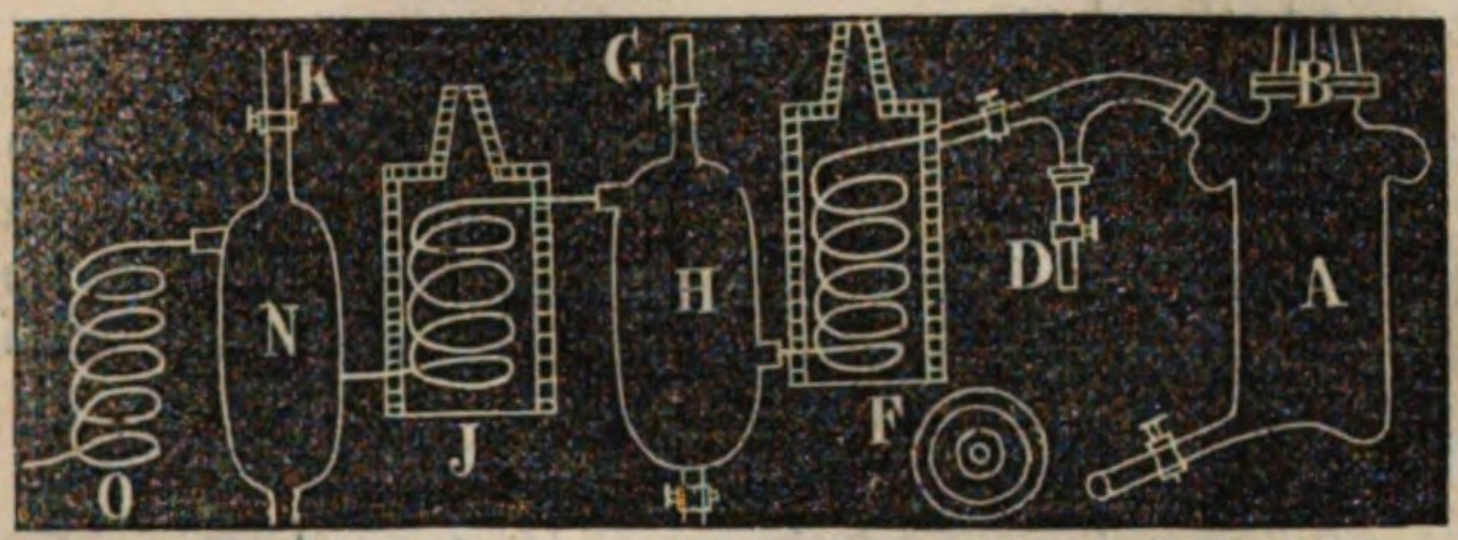
Claim.—The turn-table R, or its equivalent, in combination with the roller, in such manner that whenever the table is adjusted for turning the cheese, there will be a corresponding adjustment of the roller for facilitating the process of turning the same.

No. 9,626.—William Mansfield, of Dracut, Mass.—*Improvement in Knitting Machines.*—Patented March 22d, 1853.

By the aid of this improvement, the operation of knitting a piece of goods is performed by means of a single thread or yarn taken from a bobbin, and two sets or series of hooked needles. The principal feature of this improvement consists in the manner of operating one set of needles with respect to the other set. To fully explain this machine, would require large drawings.

Claim.—The manner of forming the loops in knitting ribbed fabrics, viz.: by the combination of two sets of needles, made to operate together; which affords important advantages in constructing and operating the loom.

No. 9,627.—James Riley and William Allen, of Southfield, N. Y.—*Distilling Rosin Oil.*—Patented March 22d, 1853.



The nature of this invention consists in the distillation of oil from rosin, by passing it in an expanded state from the alembic, where it is first heated, through one, two, or more worms, or other suitable vessels, encased in fire-brick, cement, or clay, so as to be heated by conduction, in contradistinction from actual contact with the fire; and with pitch-receivers, flow-backs, and other necessary connecting pipes, stop-cocks, or valves. The alembic is charged up to about two thirds of its capacity with rosin, and a saturated solution of nitrate of soda or potassa—equal to about one per cent. of the rosin used—is added, and the heat raised to 500 degrees Fahrenheit. The heat in the worms F and J is kept from 10 to 20 degrees higher than that of the alembic. A, is the alembic; B, the man-hole; D, acid and spirit pipe and valve; F, heated worm; G, gas escape pipe; H, pitch receiver; J, heated worm; K, gas escape pipe; N, pitch receiver; O, cold worm.

Claim.—The process of manufacturing oil from rosin by passing it from an alembic through expanding worms, or their equivalents, surrounded by a jacket of fire-brick or clay; whereby we prevent destructive distillation and carbonization, and greatly economize time.

No. 9,628.—James Stanbrough, of Newark, N. Y.—*Improvement in Harness.*—Patented March 22d, 1853.

This improvement consists in the mode of forming on any part of a harness "rounds," "raises," or "rolls," as they are termed by leather workers; by doubling and sticking together a strap of leather at its edges, or laying a welt or secondary strap upon a principal strap and stitching them together at their corresponding edges, and then binding these edges with a separate piece; and in depressing the raises or rolls so as to conceal the stitching upon their binding, by drawing up and fastening by their sides a fold of the principal strap.

Claim.—The above description embraces the claim of the inventor.

No. 9,629.—Seth D. Tripp, of Rochester, Mass., Assignor to Edward L. Norfolk, of Salem, Mass.—*Improvement in Machines for Pegging Boots and Shoes.*—Patented April 12th, 1853.

The principal parts of this machine are the following, viz.: Machinery for supporting the shoe, and moving it under the pegging mechanism.

Machinery for sustaining the pegging mechanism, and regulating the direction of the pegging awl, so that it shall pass into the sole at the proper angle, under any change in the curvature in the sole.

Machinery for operating the pegging awl and driver.

Machinery for sustaining the peg-wood, and forcing it forward towards the shoe.

Machinery for splitting the pegs from the wood.

Machinery for operating the charger that contains the peg-wood.

Claim.—The inventor's claims embrace the construction, combination, and operations of the machinery or mechanism above referred to, for the purposes fully set forth in his specifications and drawings, and therein described.

No. 9,630.—Luther Atwood, of Boston, Mass.—*Improvement in Preparing Lubricating Oils.*—Patented March 29th, 1853.

To prepare this oil, denominated *coup oil* by the inventor, crude coal tar is placed into a retort, connected with a condenser. By means of heat, vapors of fluids are condensed in the condenser, until the temperature in the retort rises to 700 degrees Fahr. The temperature during distillation should be 150 to 175 degrees Fahr. To 100 gallons of distillate add 200 lbs. caustic soda, marking 25 degrees Beaumé, which is agitated for two hours. The clear distillate is placed in a leaden vessel, where it is mixed with 50 lbs. sulphuric acid, and agitated for four hours. The clear oil is then removed to an iron vessel and mixed with 100 lbs. of solution of caustic soda marking about 25 degrees Beaumé, stirred for two hours, and left to repose for six hours. The clear oil which separates is now ready for distillation, which is done in an iron retort at a temperature of 150 degrees. The impure oil thus obtained is put in a leaden vessel and mixed with 25 lbs. of sulphuric acid to 100 lbs. of oil. The acid being allowed to subside, the clear oil is finally purified by agitation with solution of caustic soda 25 degrees Beaumé, and again distilled in an iron retort, mixed with 12 lbs. of hydrate of soda and one gallon of water for every hundred gallons of oil. This oil is then ready for use, and may be mixed with other oils for lubricating.

Claim.—The "coup oil," or combination of paranapthaline and fixed oils derived from coal tar and boiling from 450 degrees to 675 Fahr., as produced by the process described, the manufacture being useful as a lubricating composition, either alone or combined with oils or fatty matter.

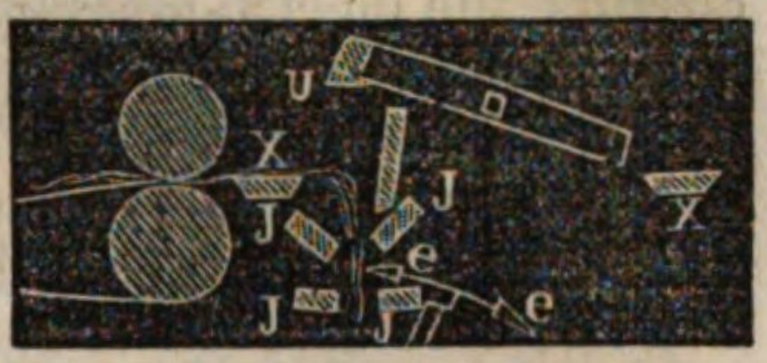
Also, the combination of this product so made with concrete or thick fatty matter or oils, for the purpose of liquefying them, or rendering them more mobile, &c.

No. 9,631.—Schuyler Briggs and John G. Talbot, of Sloansville, N. Y.—*Improvement in Fanning Mills.*—Patented March 29th, 1853.

The nature of this invention consists in causing the upper sieve to vibrate at a greater speed than the screens below, for the purpose of more effectually separating the impurities from the grain, thus causing the chaff and light matter to be separated and blown from the riddle. This is effected by making an additional gearing to the fan-axle, having crank and connecting-rod.

Claim.—Causing the upper sieve or riddle to vibrate at a greater speed than the lower screens.

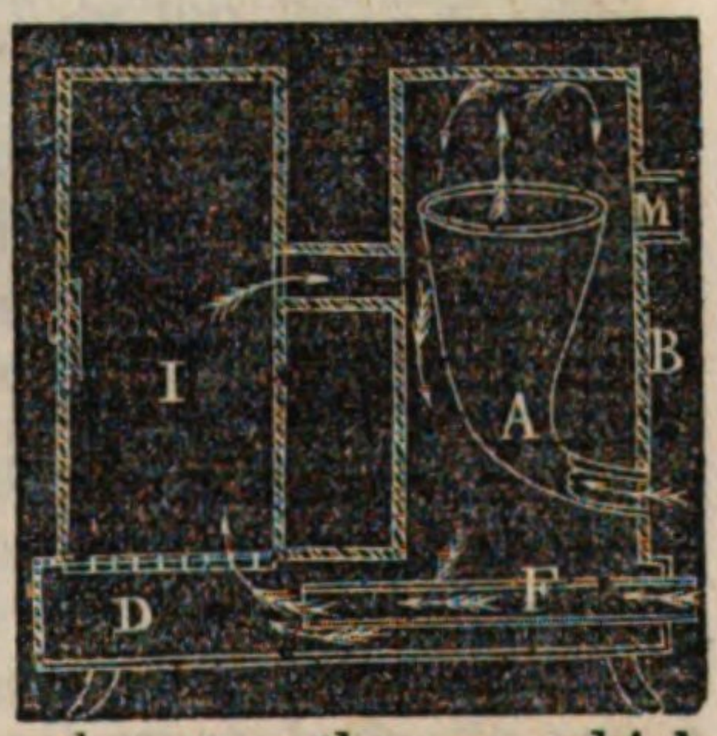
No. 9,632.—Lewis W. Colver, of Louisville, Ky.—*Improvement in Machines for Breaking Hemp.*—Patented March 29th, 1853.



The nature of this invention consists in the combination of the oscillating beater U (see fig.) and bars J J J J, above and below it, hung upon springs, so that the recoil of the springs after the beater passes the bars shall shake out the hemp, and clear it of its woody fibre. The breaker U is to break down the material, at the breaking point resting on the fixed bar X; it passes between spring bars J J J J, where it is finished by the beaters *e e*. By means of feeding-rollers, hand-wheel, and treadles, the operator has perfect control over the hemp.

Claim.—The combination of the oscillating beaters U, and the spring bars J J J J, placed above and below the beaters, so that the recoil of the springs, after the beater leaves the bars, shall shake out the hemp and clear it of its woody portions.

No. 9,633.—William Ennis, of New York, N. Y.—*Improvement in Hot-Air Furnaces.*—Patented March 29th, 1853.



The nature of this invention consists in the employment of an inverted hollow cone A, placed in a cylinder or radiating drum B, which communicates with the ash-pit, and is connected with the fire-chamber (see fig.); the cone A having its smaller end inserted into and through the side of the drum B, for the purpose of admitting a current of cold air into the drum, which is designed to operate upon the direct and heated draft from the fire chamber I, and cool it before it reaches the exit pipe, M, and consequently cause the gas which rises from the fire with the smoke to descend upon the outside of the cone, and pass into the ash-pit D, and up through the fire into the fire chamber, &c.

Claim.—The employment of an inverted cone A, within a drum or cylinder B, in whose side the taper end of said cone is inserted and allowed to communicate with the "atmospheric reversing shaft," to cool the direct heated current from the fire; the cylinder B communicating with the fire chamber I and ash-pit D, in the manner and for the purposes as described.

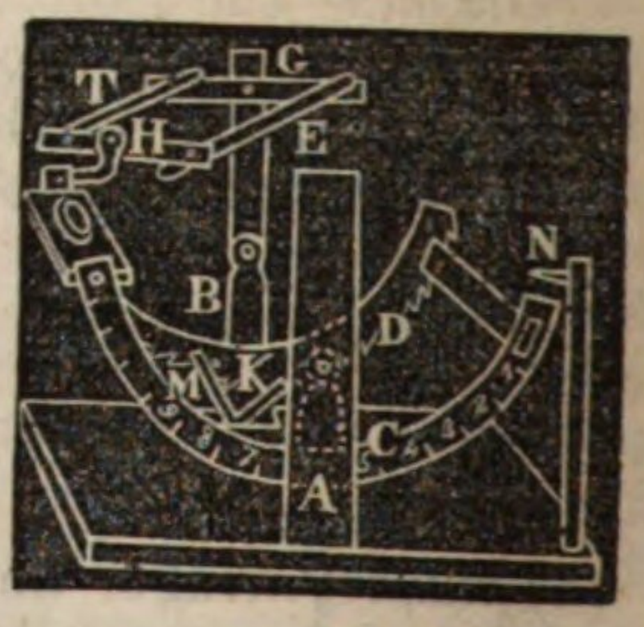
No. 9,634.—Moses G. Farmer, of Salem, Mass.—*Improvement in Electric Telegraphs.*—Patented March 29th, 1853.

The object of this invention is to enable a common telegraphic

circuit extending between any two places to be used by two or more operators at the same time, instead of but one, as at present.

Claim.—The method of bringing any number of telegraphic signalizing and recording instruments into successive electric connexion with the common communicating wire; and more particularly the combination of the writing and working, or primary and secondary circuits, the electro-magnets and their movable armatures of the primary circuit, the local magnets and their movable armatures and pallets, or equivalents therefor, and local battery, and battery connexions of each terminus, and connexions leading to the armatures of the local magnet, the escapement wheels, and wheels on the arbor of each, the two series of springs of said wheels and branch connexions, and the branch connexions of the main writing circuit at its two termini; the whole being connected and made to operate together.

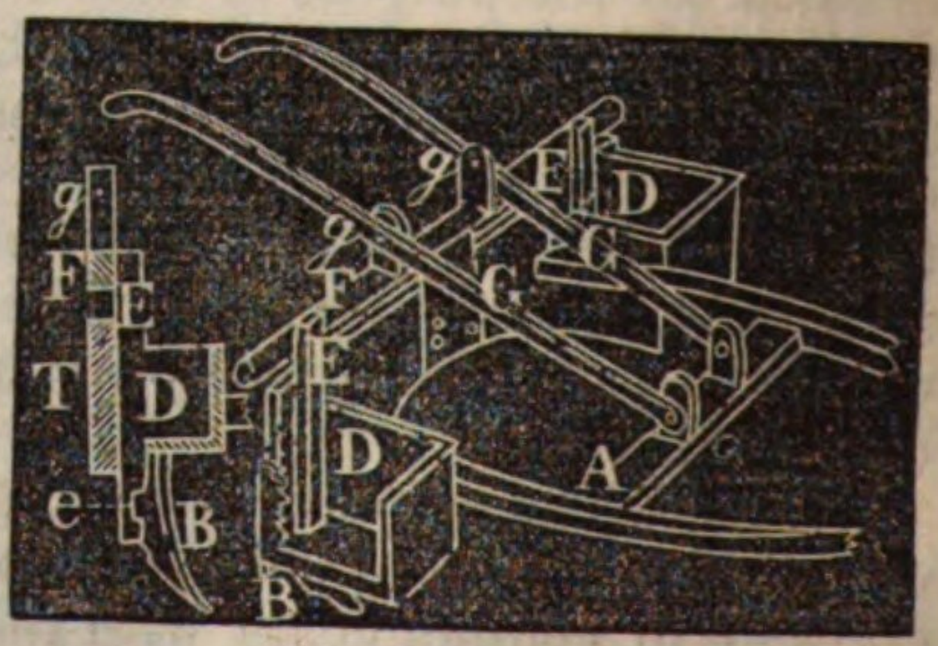
No. 9,635.—BENJAMIN FENN, of Hartford, Ohio.—*Improved Machine for Weighing.*—Patented March 29th, 1853.



In the annexed cut, A and B represent standards; C and D semicircles, D having a catch K; M another catch which holds the frame still. When the catch M is dropped from the pin, the circular frame moves. E T G H is a movable frame attached to the semicircle D. The semicircles move on arms or pivots.

Claim.—The machine for ascertaining instantly the weight of bodies, by means of a scale, dish, or plate, supported by pivots upon a heavy or weighted semicircular frame or its equivalent, in the manner of a pendulum, and operated by catches.

No. 9,636.—ISAAC H. GARRETSON, of Clay, Iowa.—*Improvement in Seed Planters.*—Patented March 29th, 1853.



The figure is a perspective view of the planter. T is a section of the hopper and slide. The hoppers D are attached centrally over the cultivators B to the frame A for containing the corn. These hoppers are fitted with vertical slides E, each of which has a notch to receive the corn at suitable intervals from the hoppers, and discharge it, at the proper periods, in the wake of the cultivator. Both slides E are operated upon by the bar F, which is raised or lowered, as required, from the back, by handles G, pivoted to the bar F, at *g*. When the handles G are elevated or depressed, at suitable intervals, the slides E are raised so that the notches *e* enter the grain hoppers to receive the necessary number of kernels for a hill of corn.

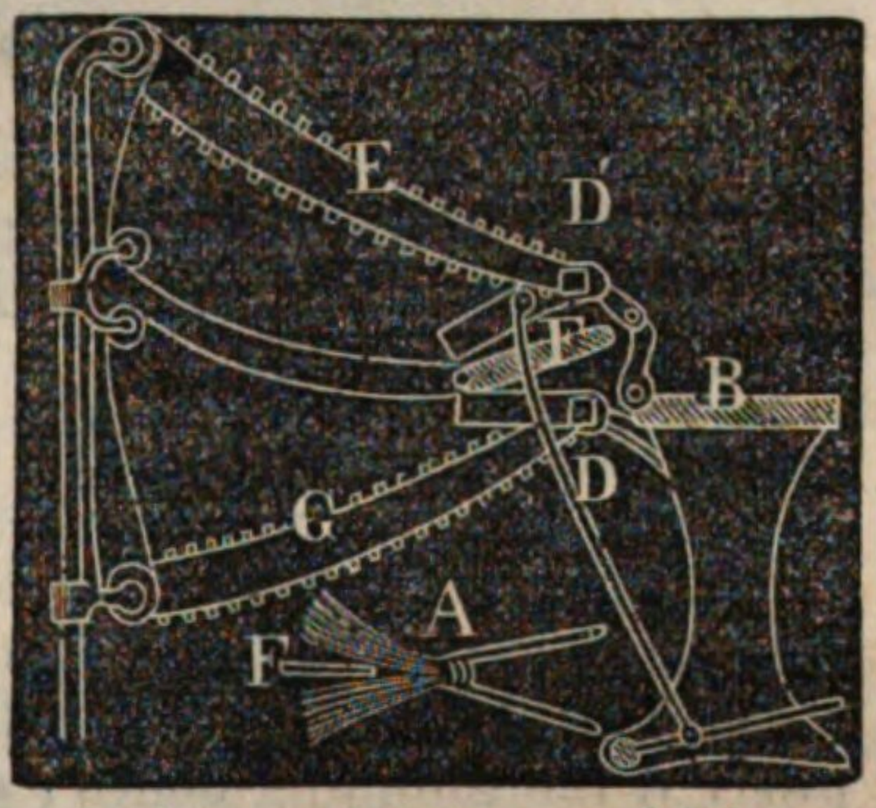
Claim.—Planting corn in check rows, by means of the planting slides E, worked on the cross-bar F.

No. 9,637.—John Maxwell, of Galesville, N. Y.—*Improvement in Knitting Machines.*—Patented March 29th, 1853.

This improvement pertaining to knitting looms, consists in the erection of two standards upon the back ends of the half jacks; these standards rising high enough to carry, between their upper bent ends and the bar, springs, strong enough to keep the bar firmly down upon the tail ends of the jacks; and is termed by the inventor the *locking-apparatus.* (To fully illustrate the whole machine would require extensive drawings.)

Claim.—The construction of the locking apparatus by placing standards upon the back ends of the half jacks; to carry springs, which regulate the pressure of the bar upon the jacks; in combination with an apparatus for raising said bar, &c.

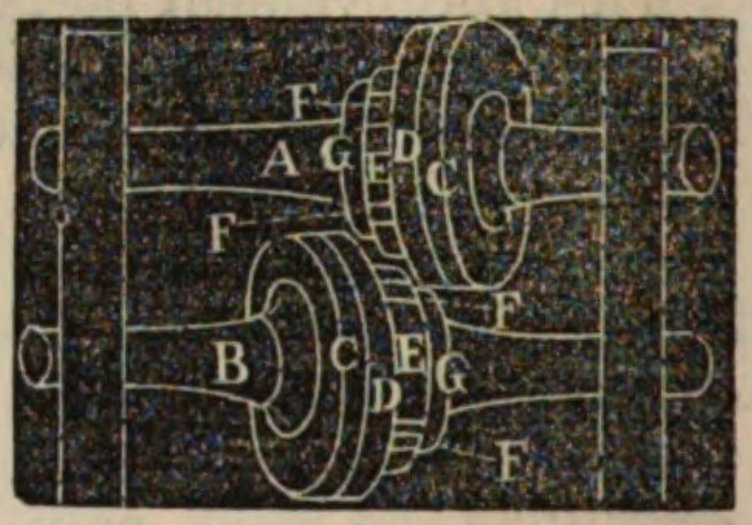
No. 9,638.—John McAdams, of Boston, Mass.—*Improvement in Machinery for Paging Books.*—Patented March 29th, 1853.



The operation of this machine is as follows: Before commencing to page a book, both the type chains are inked with a hand inking-roller, and the chains are carried along until the fig. 2 of the upper chain and the number next preceding, 1, of the lower chain are brought opposite each other ready for the impression. The book is then laid upon the table B, with the covers turned back. It is placed in such a position that when the leaves are extended naturally, they will be in proper relation to the types which are to give the impression, so as to print the number in the right place on the page. The operator sitting in front of the machine leans his right arm upon the book to hold it, and seizes the whole mass of leaves with the right hand, by the corner next the printing apparatus, and bends them up out of the way, as seen at A. The first leaf then to be paged is detached by the left hand, and placed between the tongue F and the upper chain E carrying the even figures, the leaf being extended to its natural position. The impression is then given by the foot, which prints upon the upper side of the leaf the number 2. The foot is then raised, which permits the jaws to open, and, by the operation of the ratchets and their appendages, each of the shafts D is turned one fourth of a revolution, which brings the next number in each chain to the proper position to be printed. The leaf printed by the above operation is then passed below the tongue, to receive an impression from the lower chain carrying the odd figures.

Claim.—The employment of a square rotating shaft D as a bed for the odd numbers, and the shaft D′ as a bed for the even numbers of the types, in combination with tongue F as a platen to both sets of types, the same being operated by the treadle, ratchet, and pawls, so as to enable the operator to print the odd and even numbers of a book by a single movement of the treadle.

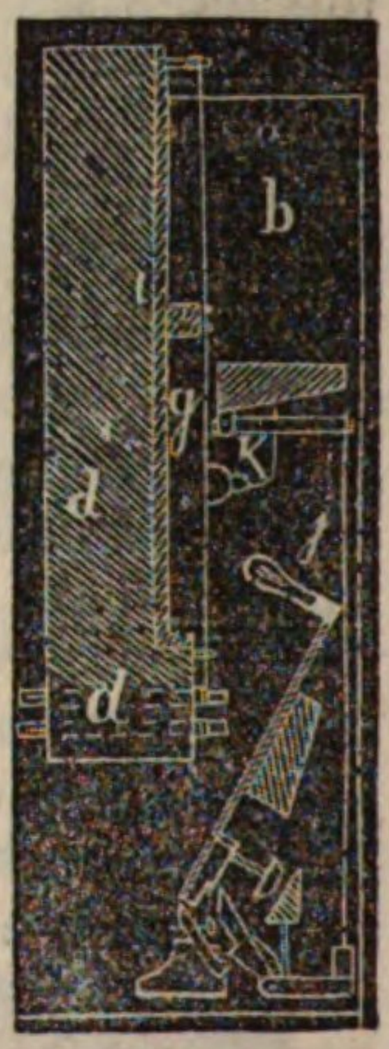
No. 9,639.—James H. Swett, of Boston, Mass.—*Improvement of the Die Rollers in Spike Machines.*—Patented March 29th, 1853.



The nature of this invention consists in skewing the shafts or axes of the rotary pointing-dies, so that they shall stand obliquely towards each other in their vertical lines; and bevelling off the faces of the dies at or about the same inclination at which the shafts stand to each other, for the purpose of forming a square close-fitting space in front of the dies, or where the blank is fed in, and spreading the dies in the rear or behind where the spike is pointed, to relieve it, and allow the nippers to take it from the dies without injury to the spike, and with certainty of action. See fig.: A and B are the shafts; C, permanent flange; D, ring; E, die holder; F, dies of steel; G, ring to hold the whole in place.

Claim.—The above description contains all that the inventor claims.

No. 9,640.—George Traeyser, of Cincinnati, Ohio.—*Improvement in Vertical Piano Fortes.*—Patented March 29th, 1853.



This improvement consists in changing the tuning-pins to a different position from that occupied by them hitherto, to wit: below the lower edge of the sounding-board, as shown in the figure, representing a section of the improved piano: *d*, is the position of the tuning pins; *i*, the sounding-board; *g*, the string; *j*, the hammer; *k*, the damper.

Claim.—The construction of a vertical piano, having the tuning pins placed below the lower edge of the sounding-board.

No. 9,641.—Thomas C. Thompson, of Ithaca, N. Y.—*Improvement in Sewing Machines.*—Patented March 29th, 1853.

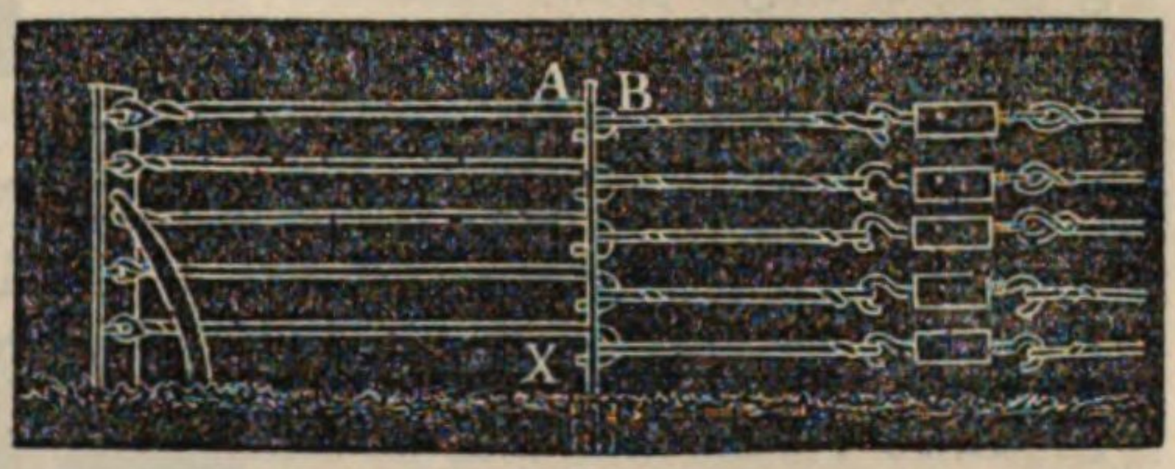
The nature of this invention consists, first, in charging the race or shuttle with magnetism, for the purpose of keeping the shuttle in perfect contact with the face of the shuttle race, without the use of springs, or holders of any kind, whilst at the same time "I insure the taking up of every stitch." Also in making the shuttle with a hinged cap, for the more readily placing therein and retaining of the bobbin or cop which is used without a spindle or spool, the thread being drawn from the inside of the cop or bobbin, by which means a uniform strain or tension is preserved on the bobbin or cop thread.

Claim.—The magnetic shuttle and race, one or both, for the purpose of keeping the shuttle in perfect contact with the face of the shuttle race, without the use of springs or any other device, and thereby insuring the securing of every stitch.

Also, the curved and hinged cap, in combination with the shuttle, to confine the cop in the shuttle.

Also, the use of a cop without a spindle or spooler, in combination with a shuttle or its equivalent, when the thread is drawn from the inside of the cop, by which means a uniform draught on the cop thread is retained, as it is drawn out from the shuttle.

No. 9,642.—Matthew Walker, Matthew Walker, Jr., & Daniel S. Walker, of Philadelphia, Pa.—*Improvement in Wire Fences.*—Patented March 29th, 1853.



This invention consists chiefly in so arranging the loop-fastenings B for wire fences, that the hook A shall be within, and sustained by the mortise in the post, as shown in the figure, in such manner that a great strain upon the wire shall not cause the wire to open out or spread, as is frequently the case with the hook and eye under other arrangements. Also an improvement in the form of the iron posts for such purposes, making the line posts of wrought iron in a concavo-convex form, for the purpose of steadiness, strength, and comparative lightness, and the corner posts of angle iron, for similar purposes. The swivel screws for tightening the fence and other parts are well known.

Claim.—The arrangement of the hooks within the mortises, so that the parts of the hook shall be sustained and kept from spreading by the mortise, while a strain upon the wires tends to steady the posts.

No. 9,643.—John H. Bloodgood, of Rahway, N. J.—*Improvement in the process of forming Yarn, by Felting.*—Patented April 5th, 1853.

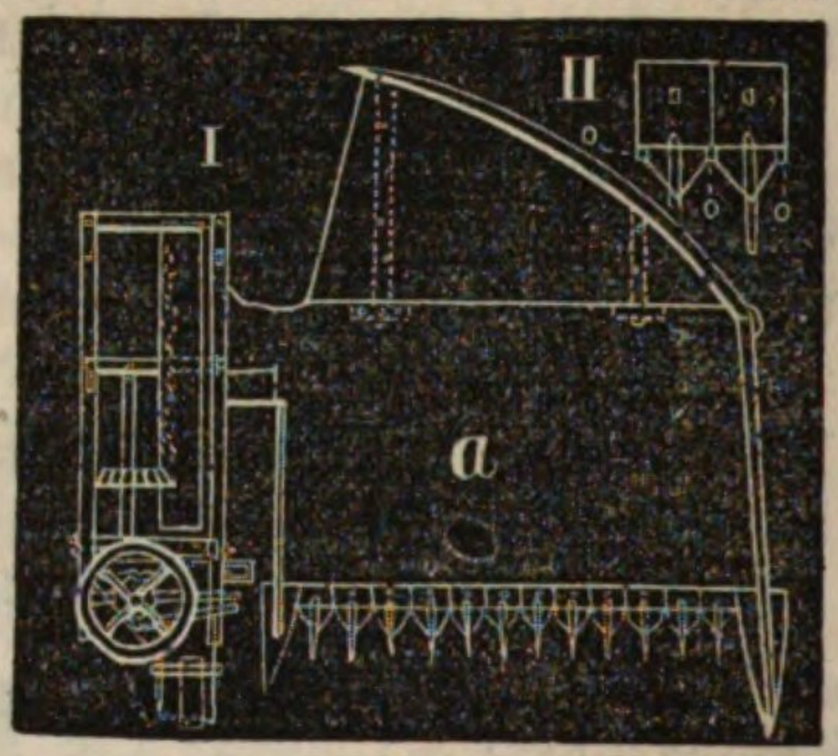
The nature of this invention consists in the production of a strong felted roving or untwisted thread of wool, capable of being employed for warp or weft in making woven cloth, or for knitting, sewing, and other purposes. The object of this improvement is the making of woollen thread suitable for the above purposes, at less expense than by the process hitherto in use for the purpose, and of greater strength. This is effected by passing the rovings through steam, and giving a rolling rubbing motion to the thread, whereby the rovings are felted.

Claim.—The formation of thread or yarn from woollen rovings, by the process of felting, instead of spinning or twisting.

No. 9,644.—Thomas D. Burrall, of Geneva, N. Y.—*Improvement in the Grain Reaper.*—Patented April 5th, 1853.

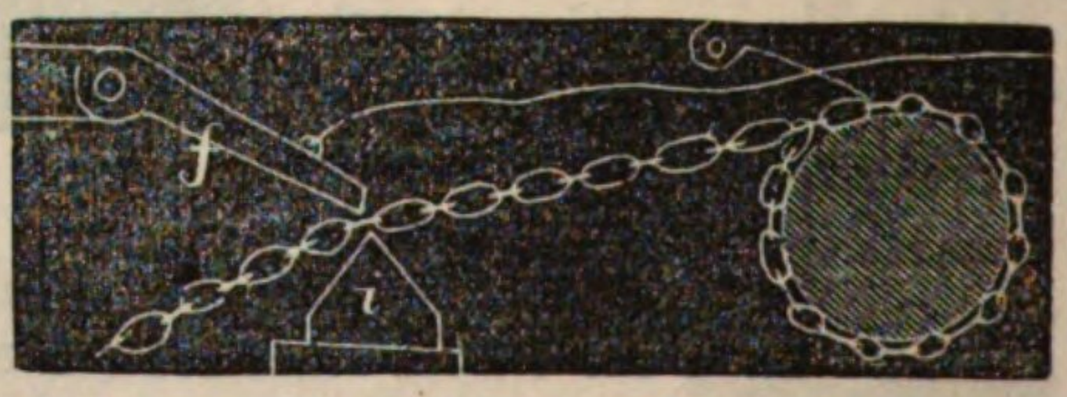
This invention is confined to that part of the harvester called the apron or platform, and consists of a device for enlarging the platform, so as to rake off the grain from the side, instead of the rear of the machine, by splicing it with a sort of triangular piece; and to a pecu-

liar device for gearing and ungearing the connexion of the cutter and driving wheel.



Claim.—The additional apron to convert the usual rear discharge into a side discharge of the cut grain. Also, the combination of the curved supports and the adjustable journal-box piece, to preserve the relative positions of the cogs in the mitre gearing, and at the same time allow of raising and depressing the driving wheel.

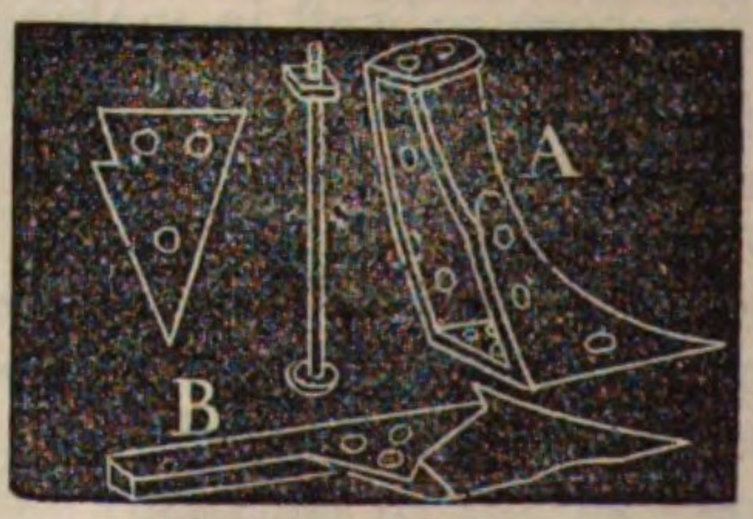
No. 9,645.—John E. Crane, of Lowell, Mass.—*Improved Self-acting Chain Stopper.*—Patented April 5th, 1853.



This improvement consists of a metallic ridge secured to the deck of a vessel, near the hause-hole; and a pawl secured to the bulwark, or knight-head (or other suitable support), in such a position that its acting end will fall upon the top of said ridge. The ridge is placed in such a position that the cable in its passage from the hause-hole to the windlass must pass over it. Ears rise from the extremities of the ridge to prevent the escape of the cable therefrom; and the operating end of the pawl extends the whole distance between the ears, to insure its action upon every link of the cable.

Claim.—The ridge rising from the deck of a vessel between the hause-hole and the windlass, combined with a heavy pawl placed above it, whereby each moving link of the cable is turned flatwise in passing over the ridge, and each link is acted upon by the pawl.

No. 9,646.—Solomon Horney, Jr., of Richmond, Ind.—*Improvement in Ploughs.*—Patented April 5th, 1853.



This improvement in ploughs pertains to the construction of the standard, or shank, and the method of securing the same to the beam and share. The object is to attain greater strength and durability. The ends of the bolts and the nuts are sheathed within the shank, thus leaving a smooth unincumbered surface on the outside.

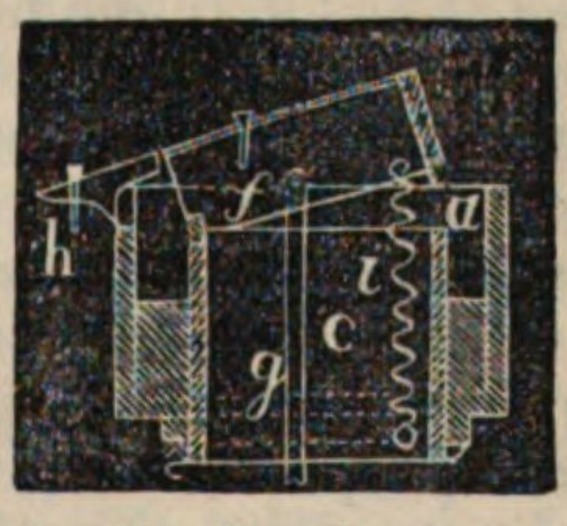
Claim.—Constructing the shank A hollow, with two closed ends, and securing the same to and with the share B and beam, by means of the master bolts and the short bolt passing through the slot in the top end of the hollow shank A, for varying the position of the shank with the beam, and giving additional security to the fastening of the same.

No. 9,647.—William H. Lindsay, of New York, N. Y.—*Improvement in "Fluid Meters and Hydraulic Engines," &c.*—Patented April 5th, 1853.

The principle or character which distinguishes this invention from others, in a machine or apparatus acted upon by a fluid, consists in, first, the peculiar combination of devices and the method of operation, by which the secondary engine with its valves is actuated and governed, combined with the same of the main or working engine and its valves, "whereby certainty of action, smoothness of working, durability, and accuracy are more perfectly attained and combined, than in any other engine operated by water, or other non-elastic fluid, in an analogous manner." Secondly. In the means whereby the engine and valves are protected against an undue amount of travel. Thirdly. "In the peculiar construction of the sluice or gridiron valves, by which they are relieved of the pressure they would otherwise be subject to; which decreases the power necessary to put them in motion."

Claim.—Operating the valves of the secondary engine by the main engine, through a portion of their movement, and completing the same through the medium of the secondary engine. Also, connecting the cross head of the main cylinder with its valves, so that these valves will close the ports of the main cylinder, in case the working parts of the secondary engine should fail to do their duty. Also, forming a recess or recesses in the under or working side of the slide valve, in combination with the secondary openings, through the seat, or in the side of the port or ports, for the purpose and in the manner described. Also, the combination of the bridge in the cylinder with the openings in the plunger.

No. 9,648.—Thompson Newbury, of Taunton, Mass.—*Improvement in the Mode of Feeding Blanks to Screw Machines.*—Patented April 5th, 1853.



This improvement consists of a hopper *a* in the bottom of which is an oblong opening, extending nearly its whole length. This opening is surrounded by a flange forming a spout, into which is fitted a slide or piston, corresponding with the size of the interior of the spout. A sufficient number of screw blanks are put into the hopper; and when the slide is pushed upwards, the screw blanks fall upon it, a number falling with their shanks down in slot *a* in the top of the slide, and are thus supported perpendicularly by their heads; the slide is then forced gradually up by the bar or rod *g*, till the flange *c* strikes the bottom of the spout in which it works, and by the continued motion of the rod *g* the upper portion is canted on its hinge over towards a permanent spout or guide *h* affixed to the side of the hopper, into which it deposits the blank, by sliding it out of its recess or slot. As the rod again descends, the upper part of the slide is closed back to its place by the spring *i*, and then the whole slide descends again for a fresh supply from the hopper.

Claim.—The slide as herein described, passing up through the bottom of the hopper in the manner set forth.

No. 9,649.—Henry R. Noll, of Lewisburg, Pa.—*Improved arrangement of Sash Fastenings.*—Patented April 5th, 1853.

This invention consists, says the inventor, in so arranging the spring catch fastenings for window sashes, that the spring for the upper sash may be commanded, without interference from the lower sash. If the lower sash is raised, the spring of the upper sash can be managed without dropping the lower sash. *a a'* are thumb pieces; *p*, the plate; *s*, the stem; *g g'*, the gallows frames. The strap *b* is hinged at *h*, in order to insure steadiness of motion. In the upper sash is a spring, consisting of a common flat spring, at the upper end of which is a friction roller.

Claim.—Arranging the spring catch fastenings for the upper and lower sash about the middle of the frame, in such manner that the upper sash can be managed without interference from the lower sash. Also, the particular arrangement of the attachments, on the *one plate* of the two spring fastenings, consisting in the spring bar *b'* (through which the spring bolt *k'* of the upper sash is operated), with its hinge joint in rear of the spring bolt *k*, and the bar *b*, and bolt *k* of the lower sash, by which I gain economy of room and a cheap and efficient action upon the two sashes.

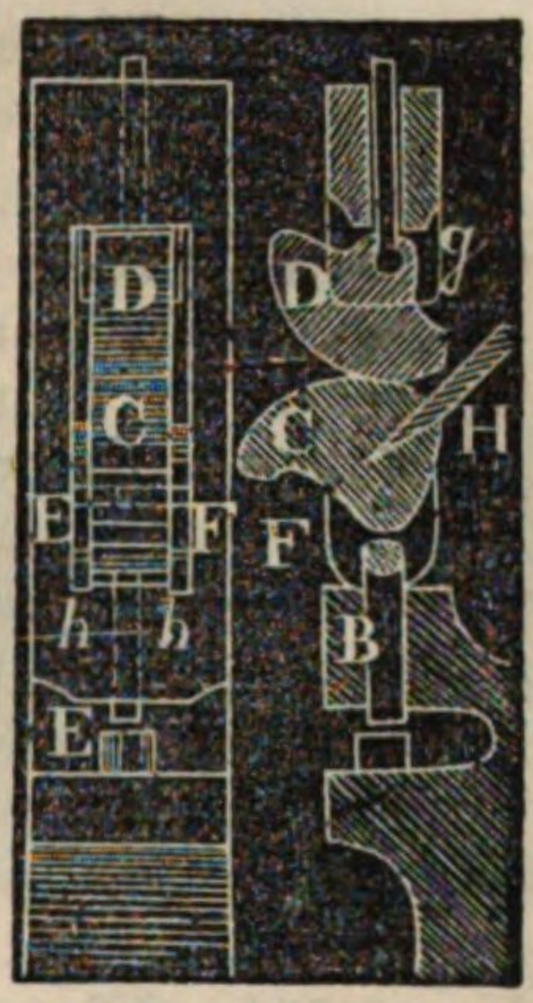
No. 9,650.—Charles James Pownall, of Addison Road, England.—*Improvement in the Process for preparing Vegetable Fibre.*—Patented April 5th, 1853.

The object of this invention is to deprive fibrous vegetable substances of their resinous and gummy matters, in order that they may be separated into fine fibres. This is accomplished by subjecting the ordinary filaments of these substances to the action of a machine constructed upon the well known principle of the tuck or fulling mill which removes the gummy matter, and then to the carding machine, to separate the flax or other fibrous filament into finer fibres.

Claim.—The mode of subjecting fibrous vegetable substances to repeated mechanical pressure and the action of a stream of water for the purpose of depriving them of resinous or gummy matters, and also resolving them into finer fibres, in the manner above described.

No. 9,651.—Samuel Rust, of New York, N. Y.—*Improvement in Sector Presses.*—Patented April 5th, 1853.

This press consists in the employment of two sectors, D C, working face to face, C only being eccentric, and the other an arc of a circle, the concentric sector working on a centre or axis which is fixed during the pressing operation, and the eccentric sector having the punch B, or other appendage, to which the motion is given to obtain



the pressure, hinged to it at its centre or axis, and having one or more bearing pieces F F attached, of such form, and in such position, that as the sector is returned to relieve the punch, or equivalent of the pressure, the said pieces will be brought in contact with a suitable rest, at *h h*, upon the press frame; and by causing the axis of the sector to be drawn up, or back in the opposite direction to that in which it moves to give the pressure, it will raise or draw back the punch, or other pressing appendage. The power is applied to the eccentric sector C by the lever H.

Claim.—One or more bearing pieces F F, at the sides or in front of the eccentric sector C, acting upon any fixed point or rest, as at *h h*, on the press frame, for the purpose of raising or withdrawing the punch or pressing appendage, by power applied to the sector, in the reverse direction to that by which the pressure is given. Also, allowing the eccentric sector a sufficient amount of motion, directly in the line of the pressure, to enable it to follow and always keep in contact and in proper relation to the eccentric sector.

No. 9,652.—ELLIOT SAVAGE, of Berlin, Conn.—*Improved Machine for Cutting the Threads of Wood Screws.*—Patented April 5th, 1853.

[Extensive drawings, and a very lengthy description would be necessary to convey an intelligible idea of the construction and operation of this invention.]

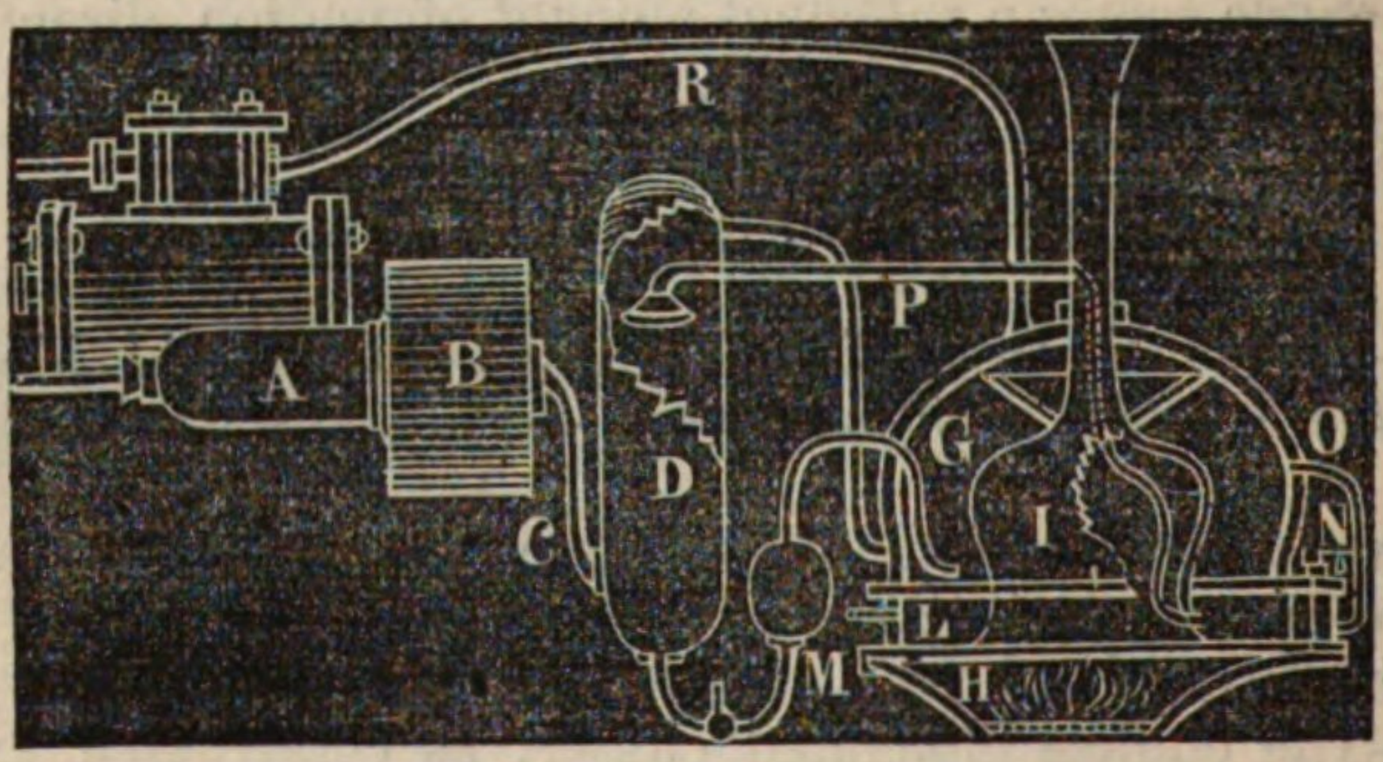
Claim.—The endless elongated chaser, as constructed, and made to turn and move on a pin or its equivalent, and to act against a screw blank, while in rotation and movement, as specified. Also, the feeding cam or apparatus, as applied, so as to be operated by the chaser, and feed it forward against the screw blank. Also, the movable rail and groove, together with mechanism for elevating and depressing the rail; the mechanism for such purpose being the two grooves, and their inclined planes, and the studs, and the springs of the rail. Also, mechanism for withdrawing the driver from the head of the screw, or releasing the screw from the machinery by which it is put in rotation; mechanism for removing the cut screw from the endless chaser, and presenting another screw blank to the operation of it as described. The mechanism for restoring the driver and other parts to their correct position, to again set in motion the screw cutting machinery; the machinery as described for actuating the driver, being a cam, a pitman, a rocker shaft, bent arm, and forked lever; that for removing the cut screw from the chaser and presenting it to a fresh screw blank, being the rotary blank holder, the gear wheel, and the arms; that for restoring the parts to their correct position, to again set in motion the screw cutting machinery, being the pitman and the spring, the whole being applied and made to rate together.

No. 9,653.—William Smith, of New York, N. Y.—*Improvement in Weaving Corded Fabrics.*—Patented April 5th, 1853.

The object of this invention is to furnish means for weaving fabrics formed by a centre warp of India rubber, for corrugated elastic goods, or any similar warp, which is inclosed by a fabric formed on each side of it, by filling from two shuttles, one passing above and the other below the centre warp, which is stationary, the sheds being formed by upper and lower warps, worked in any usual manner.

Claim.—The process of forming a fabric, by the combination of stationary and movable warps, with two weft threads, passed simultaneously through the two sheds, formed above and below said stationary warps; the wept threads being held in place in the manufacture of stationary warps by the movable warps.

No. 9,654.—William Mt. Storm, of New York, N. Y.—*Improved Process for Mixing Air and Steam for Actuating Engines.*—Patented April 5th, 1853.

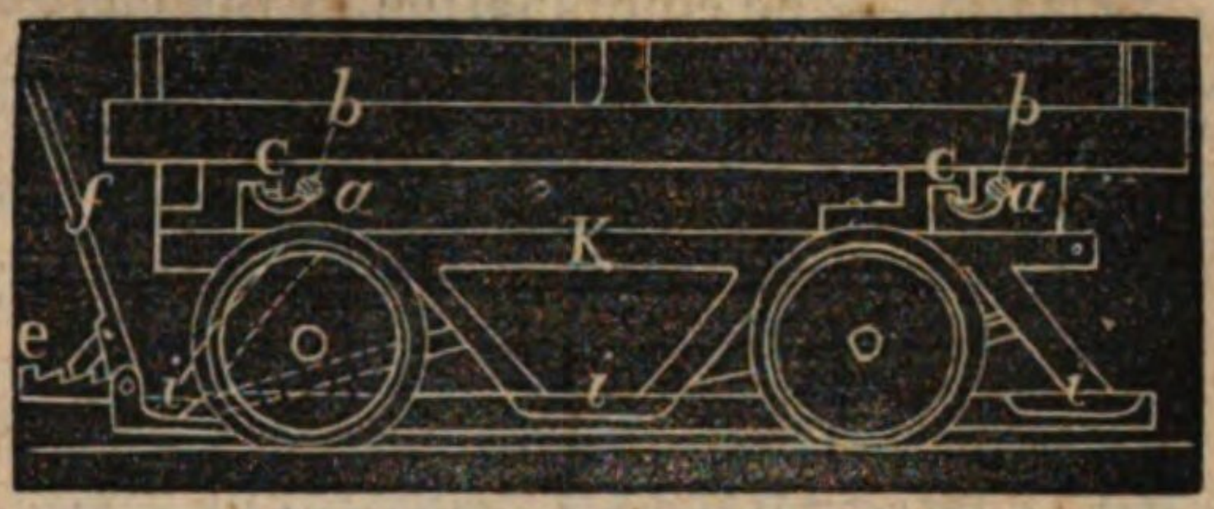


The improvement in this method consists in generating the steam from graduated quantities of water, in a comparatively dry vessel or "heater," by which plan the amount of steam formed in a given time may be controlled sufficiently, so that the quantities of air and steam admixed may be more constantly and closely proportioned. In the fig. A is the air-pump; B, small receiver; C, pipe leading to water charger D, stuffed with fine tangled wires, in which the air is charged with the necessary moisture; E, charge pipe to the air and steam chamber G, also stuffed with wire mattress; H, furnace; I, fire dome, with chimney; L, heating chamber of supply water; M, supply pipe; N, pressure valve; O, steam escape pipe. The jet pipe P leads the heated water into chamber D, to the rose in the charger; R, the closed pipe leading to the engine cylinder.

Claim.—Generating the steam for intermixing with the air or other gaseous body, in contact with the latter, the air or gas not being the hot product of combustion, nor to arrive at the place of admixture from direct contact with any body of fuel undergoing combustion. Also, the plan of generating the steam for such purpose in some (comparatively) dry vessel or heater; the water from which the steam is so generated being mainly held, while evaporating, *in suspension in the air*, for the objects specified; and the air and water, to that end,

being caused by some adequate means to meet with an extensive surface of mutual contact, as explained, &c.

No. 9,655.—GREGOR TRINKS, of Jersey City, N. J.—*Improvement in Car Brakes.*—Patented April 5th, 1853.



The nature of this invention consists in the providing and manner of operating a shoe or brake frame, the sides and ends of which are parallel to the truck frame, and placed either inside or outside of it, the frame being provided with shoes, which stand over the line of the track; and so arranging the two frames that their entire weight may be transferred from one to the other, and so that when the train is in motion the truck frame shall carry the shoe frame, and when the train is to be stopped the shoe frame shall support the truck and its frame, or such portions thereof as the emergency shall require, raising the wheels from the track, and allowing the shoes on the brake frame to slide on the rails, and thus retard the speed of the cars, and that without any sudden jar. The shoe frame K is made of iron; c c are stationary catches, into which the hooks *a a* on the ends of the oscillating shafts catch, and support the shoe frame. When the brake is at rest, a lever *d* extends down from each shaft *b*, and is hinged to the rack bar *e*, so that the rack bar *e* is moved backward or forward by means of the lever *f*, an oscillating motion will be given to the shafts *b b*, which motion throws the cam hooks *a a* into or out of connexion or operation, and raises or lowers the shoe frame, so that the shoes *i i* thereon shall come in contact with or slide on the rails.

Claim.—So combining the shoe frame with the ordinary truck or car, as that it may be raised or lowered by the operation of the brake lever, so as to be carried by the truck, or to receive the weight of the car to aid in applying the brakes, and so that the wheels shall not come in contact with the shoes but be free to turn. Also, giving the truck or car a motion independent of the shoe or brake frame, by means of the curved inclined planes, or their equivalents, on the shoe frame, up which the axles of the trucks may roll, by an easy, swinging motion, whilst its entire weight continues to aid in applying the shoe or brake to the surface of the rails.

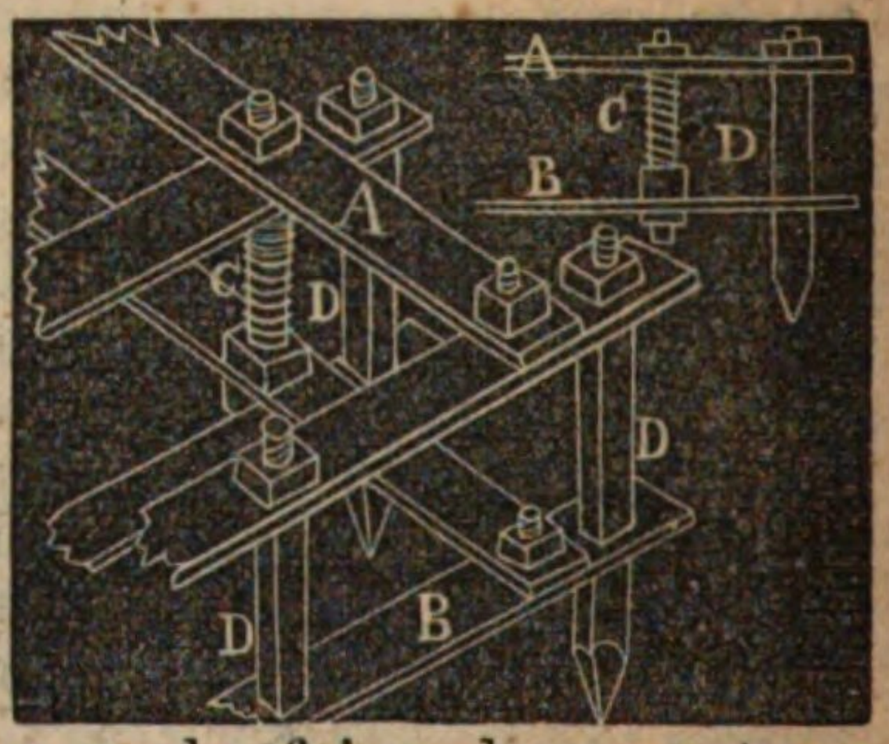
No. 9,656.—JOHN J. UPDEGRAFF, of Selins Grove, Pa.—*Improvement in Stoves.*—Patented April 5th, 1853.

This improvement consists chiefly in arrangements of the parts of the stove, so as to combine an extensive radiating surface with an extensive air-heating surface. Also, other arrangements or combinations for the economizing of heat. (See fig.) A is a central air-heating tube, extending from the base of the stove through the fire-pot to the top of the stove; between this tube and the fire-pot an annular

space is left, or fire chamber R for the coal. The pot is so cast as that a part of the tubes are without the fire chamber, and so as to be joined firmly by their continuous sides. The air enters the bottom of these tubes, and ascends into the passage C.

Claim.—The combination of the central hot-air passage, the annular fire chamber, and tubular fire pot, for the full economy of heat. Also, the combination of the outer casing P, the tubular fire pot, and central hot-air passage, so that the currents of each may all unite and co-operate.

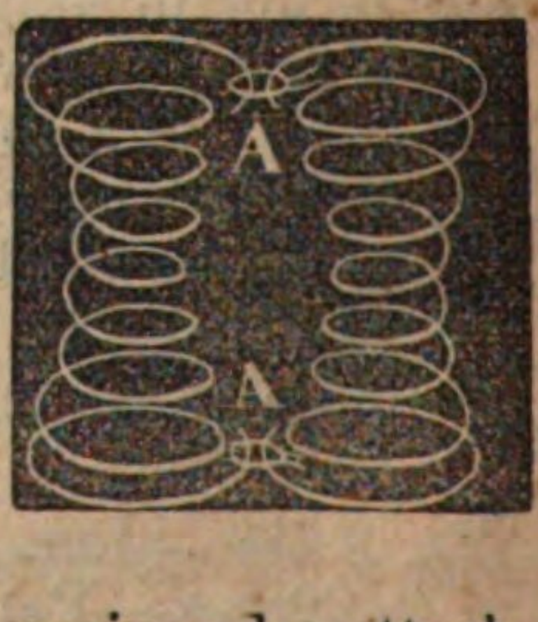
No. 9,657.—WILLIAM BERLIN, of Berryville, Va.—*Improvement in Harrows.*—Patented April 12th, 1853.



This invention (or improved harrow) is constructed of two frames, made of bars or straps of iron from three to five feet long, and one to one and a half inches wide, and half an inch thick. The lower frame B (see fig.) is attached to the upper frame A by studs or adjusting bolts C, whereby the lower frame can be elevated or depressed, so as to lengthen or shorten the drag or dip of the teeth D.

Claim.—Constructing a double frame-work of iron bars or straps of metal, and *arranging* and *combining* the two together, by graduating bolts, or adjustable screws and taps C (fig. 1), by which means the lower frame B can be elevated or depressed, and the teeth lengthened or shortened in their drag or dip.

No. 9,658.—EDWIN L. BUSHNELL, of Poughkeepsie, N. Y.—*Improvement in Spring Mattresses.*—Patented April 12th, 1853.



This improvement consists in connecting the top and bottom coil of each spring firmly to its fellows, at each point of contact, with strong twine A A; the coils at the angles of the parallelograms having two, those in the outer rows three, and those in the interior each four ligatures, so that the whole cluster is firmly united. The springs thus united mutually support and keep each other in place.

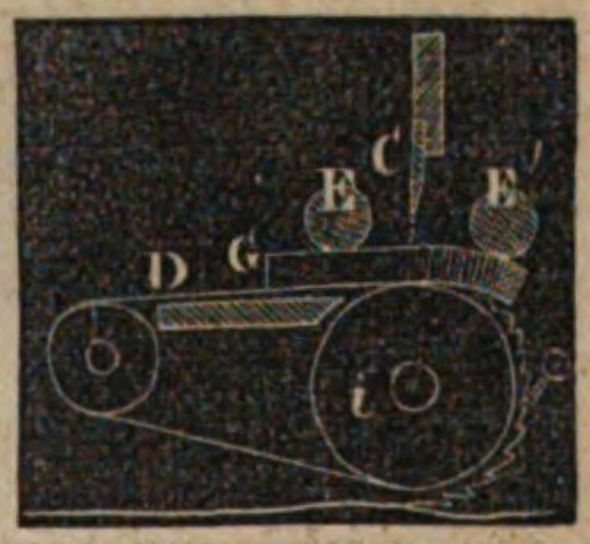
Claim.—The mode or principle of securing the springs by attaching the free extremities of each spring to the terminal coil of the adjacent spring, so that they mutually support each other without the use of any inflexible frame of wood or other material; at the same time that in rolling or folding up the mattress, the outside ends of the springs are exposed or open, while the inside ends contract or close, and thus it may be rolled or folded upon itself, or compressed.

No. 9,659.—H. L. Fulton, of Chicago, Ill.—*Improvement in Smut Machines.*—Patented April 12th, 1853.

The nature of this invention consists in the employment of a circular collar, or prism-shaped concentrator, secured to and round the inner periphery of the concave or outer casing. The concentrator being placed between each pair of revolving scouring plates, and inclining towards the centre of the machine, for the purpose of throwing the grain (as it is thrown against the inner periphery of the casing) back towards the centre of the machine upon the inclined fans and second scouring plate; and thus the grain is prevented from passing down between the inner periphery of the case, and the outer periphery of the revolving dish-shaped plates, before it is perfectly cleaned. Also, in the employment of the revolving dish-shaped scouring plates, in combination with the prismatic ring, or the case, for the purpose of concentrating and directing the grain from one beater to the other.

Claim.—The circular prismatic shaped brace and concentrator, arranged between each pair of revolving scouring-plates, and secured to the inner periphery of the case, for the purpose of concentrating the grain, and throwing it upon the second scouring plate, and preventing its escape, as above mentioned. Also, in combination with the revolving dish-shaped plates or beaters, the prismatic ring for the purpose of concentrating and directing the grain from one beater to the other.

No. 9,660.—Reuben F. Gustine, of Chicago, Ill.—*Improvement in Match Splint Machines.*—Patented April 12th, 1853.



The nature of this invention consists in splitting the block for matches while supported on a convex surface or rest *i* (see fig.), by means of a reciprocating knife C, acting in the line of the radii of the convex rest *i*; the grain of the wood in the line in which the split is required to be made coinciding with the radii of the rest in which the knife works; the curvature of the rest permitting the free ends of the splints to separate without obstruction whenever the knife penetrates the block, so that the splitting will be effected with facility, and with expenditure of a small amount of power. C represents the reciprocating knife; D, the belt; E E′, pressure rollers; *i*, the rest roller, with a feeding ratchet; *g*, the block to be split.

Claim.—The combination of the reciprocating knife with a convex or protuberant rest and feeding and holding mechanism, and the pressure roller E′, or any equivalent therefor, for the purpose described.

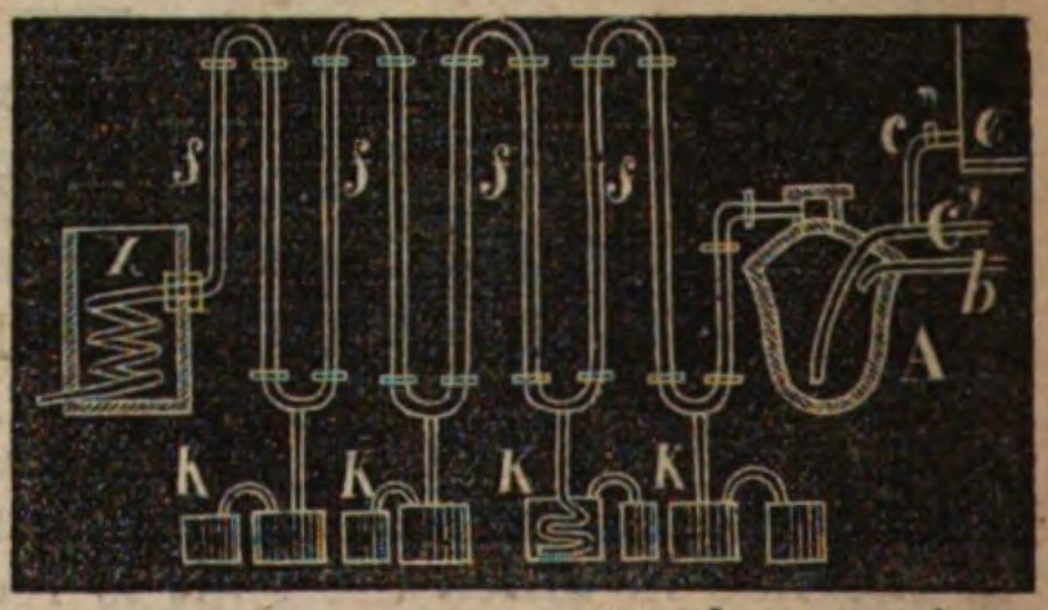
No. 9,661.—Jacob J. Hatcher, of the District of Spring Garden, Pa.—*Improvement in the Apparatus for testing the Genuineness of Coins.*—Patented April 12th, 1853.

The nature of this invention consists in providing a case or chamber in which the coins may be permanently held between a movable

spring bar D (see fig.) and the top of the case, in such manner that when one coin is drawn out the next will rise in its place, and so on until all are raised and drawn out; and in furnishing a coin-case with a weighing or gauging apparatus, so arranged as to be slid within, and be entirely protected by the case, when not in use, by which means it is easily kept in order, and conveniently drawn out when required for testing coins. A represents the case; B, spiral spring; D, metallic movable pad; E, metallic pad; F, coin; G, slide which forces out the coin. In the lower case, between plate C and bottom plate J, is a sliding, weighing, or gauging apparatus K M, which is retained by the screw connected with the bottom plate.

Claim.—A coin safe or receptacle, consisting of the arrangement of the outer case A; spring B, with its pad for holding the coin up against the top of the case; and slide G, with its projection, or their equivalents, for forcing out the coin through the slot provided for the purpose.

No. 9,662.—Samuel W. Hawes, of Boston, Mass.—*Improvement in Manufacturing Rosin Oil.*—Patented April 12th, 1853.

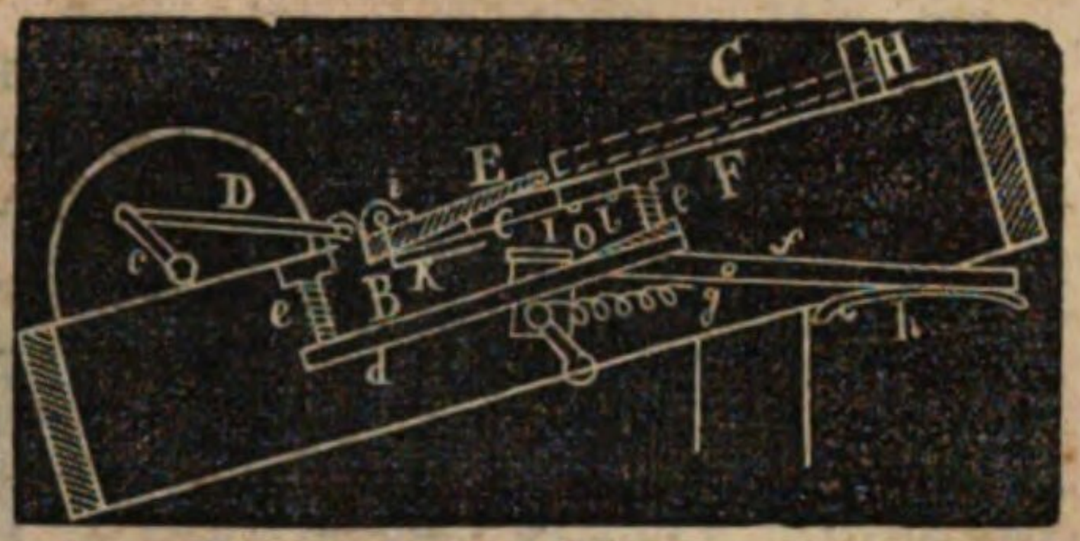


This improvement consists in the arrangement of the pipes *f f f f*, so as to discharge the oil during the process of distillation, and to separate it from the spirits, acid, and naphtha. The object in part is to free the oil from smell, and make it of a better color and quality than when manufactured in the common way. A represents the cast-iron still; *e*, a rosin reservoir; *c'*, the long branch extending to the bottom of the still, and serving to blow off the residuum; branch *c''* to charge the still with rosin; *b*, steam pipe; *f f f f*, pipes connecting with the alembic, of about 7 inches diameter; K K K K, are small coolers containing worms; x, is the large worm.

Claim.—In the process of making rosin oil, the charging and discharging the still, by means the same in principle as set forth, whereby the necessity of unluting is saved, and the incrustation of the still is prevented. Also the separating of the oil from the more volatile products, at different and distinct points, remote from the still, instead of discharging them all together as heretofore done, by means of the series of recurved pipes, in combination with the series of condensers attached thereto, as set forth.

No. 9,663.—Simon Ingersoll, of New York, N. Y.—*Improvement in Shingle Machines.*—Patented April 12th, 1853.

This invention relates to an improved machine for cutting shin-

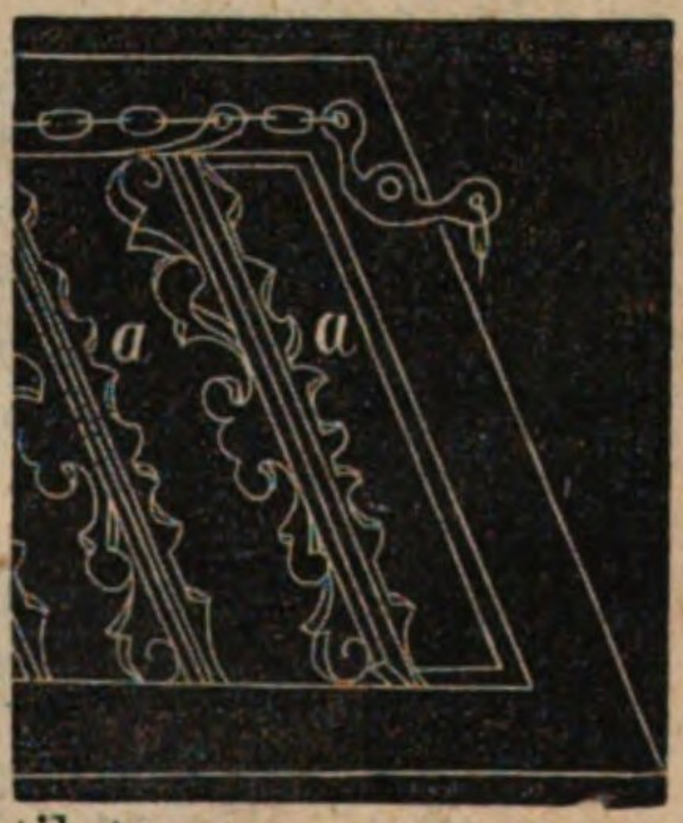


gles from the block, and giving them the requisite bevel, at one operation, and with the same machine, by means of a frame having a reciprocal rectilinear motion, the frame having a knife on its upper board or surface, which splits or cuts a strip from the under surface of the block; the strip, after being cut from the block, is thrown, by means of a clasp acted upon by a spring, upon the lower board of the frame, when it, under a stationary knife or cutter, is given the desired bevel, and thus formed to the proper shape for a shingle.

The employment or use of the spring clipper K, in combination with the riving knife, constitutes this invention. G, is the block from which the shingles are cut; F the bed; H, the stop; B, the frame, to which the motion is communicated by the crank C; E, the knife; K, the clamp or clipper, upon which the strip cut from the block G falls and is thrown upon the bottom board *d*.

Claim.—The spring clipper K, operated as described, in combination with the riving knife, for the purpose of insuring the complete separation of the shingle from the block, and at the same time throwing it on the lower bed, in position to be carried to the dressing knives, by the next advance of the driver.

No. 9,664.—Edward A. Tuttle, of Williamsburgh, N. Y.—*Improvement in Hot Air Registers and Ventilators.*—Patented April 12th, 1853.



This improvement consists in ornamenting the leaves of ventilators or registers; and in so arranging the leaves as to dispense entirely with the ornamental top plate, now employed. (See fig.) *a*, a leaf.

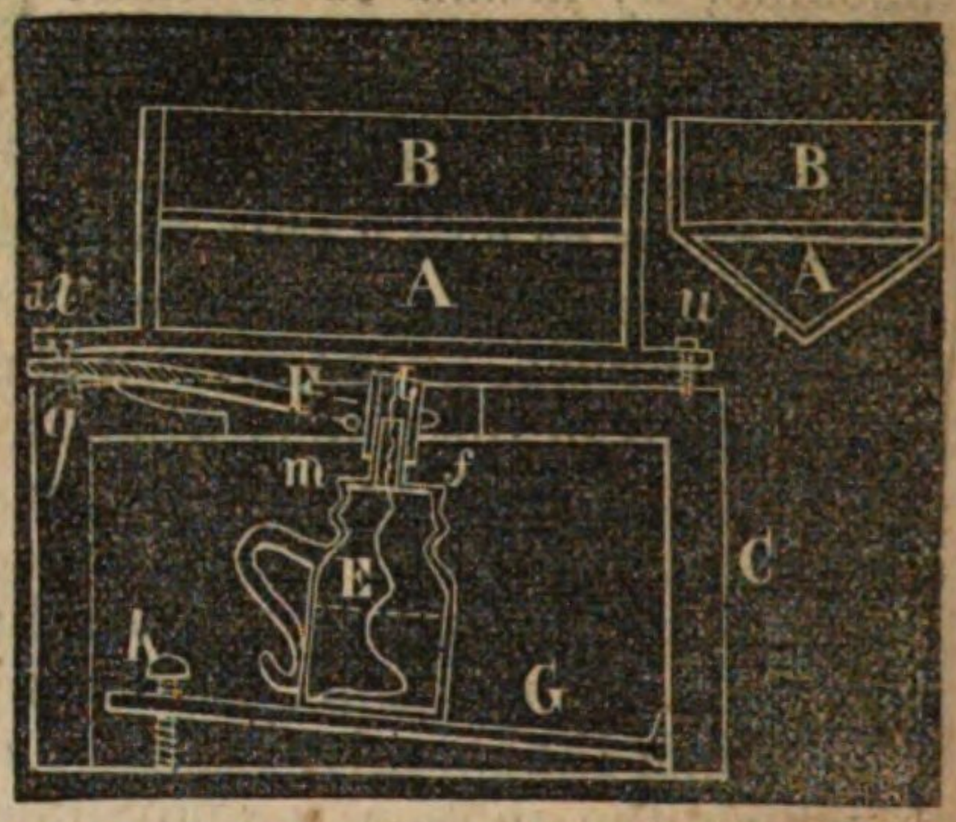
Claim.—Constructing the leaves of a register or ventilator with projections on their surfaces, to form an ornamental open or fret work between the leaves, when they are turned with their edges uppermost or partially so, for the purpose of dispensing with the separate front or top plate of ornamental open work now employed on registers and ventilators.

No. 9,665.—William H. Johnson, of Granville, Mass.—*Improvement in Sewing Machines.*—Patented April 12th, 1853.

This improvement consists in the construction of a hollow rotary clamp composed of two skeleton disks or shells, meeting closely at their perimeters, so that the cloth can be folded in the interior of the clamp while the seam is arranged around the edge; this clamp being so operated as to render the machine self-feeding.

Claim.—The use of a hollow rotary clamp, for holding and feeding cloth or other material to be sewed.

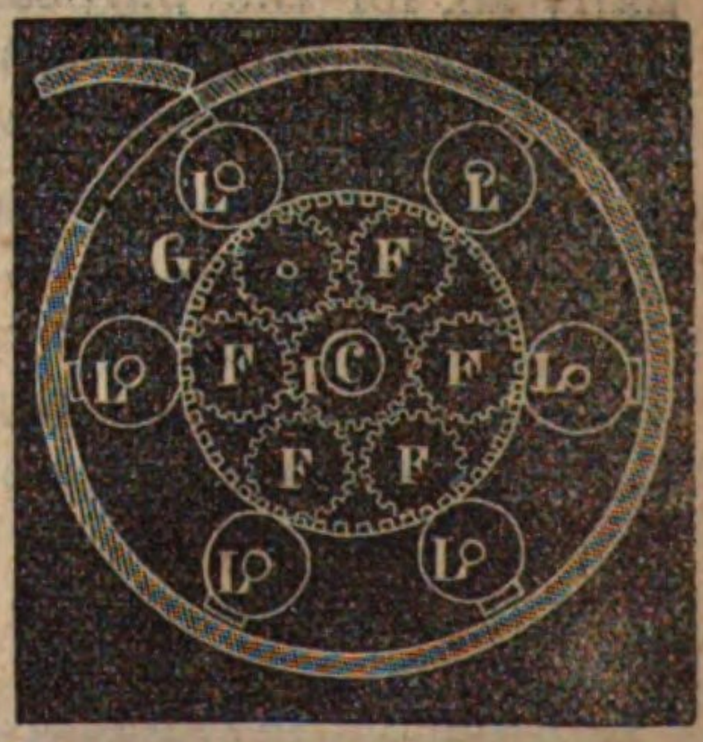
No. 9,666.—Benjamin Franklin Upton, of Bath, Me.—*Improvement in Mercury Baths for Daguerreotyping.*—Patented April 12th, 1853.



In this improvement, the heat of the lamp is received by the cast iron bottom A, which is made in the form of a hopper. B is a wooden box secured to A; the bottom of the latter has a projection *w*, through which a screw passes, and secures it to the wooden stand C; and from projection *v* extends a knife-edge lip downwards into a recess or notch made into the upper side of metallic rod F, resting upon a knife-edge or lip *g*. G is a movable platform regulated by screw *k*, upon which the lamp E is placed. The lamp has a tube allowed to play freely, and suspended to the end of rod or lever F. The heat received by the bottom A and the mercury in the bath will cause the bottom to expand lengthwise, and thereby press the upper knife-edge against the outer side of the upper notch of the lever F, and so as to tilt or cause the inner arm of the lever to rise and lift the slide tube on the wick and diminish the flame. Should any sudden current of air reach the bath, or any diminution of heat take place, a contraction of the bottom will follow, which will cause a depression of the lever and tube whereby the flame will be increased.

Claim.—The improvement of combining with the mercury bath and the lamp for heating it, the slide tube L and the lever F (or their equivalent), so that by the expansion of the bath the lever may be moved, so as to elevate the slide tube on the wick, and decrease the flame and consequently the heat thereof, and thus maintain, or nearly maintain, equality of evaporation.

No. 9,667.—Charles Wilgus, of West Troy, N. Y.—*Improvement in Clothes Washing Machines.*—Patented April 12th, 1853.



This improvement consists of a drum or net cylinder G, which is supported by rollers geared together F F F F, working a centre cog wheel I; the pressure rollers L L L L L L, are made to yield by means of springs; the cloth to be operated upon is brought between the revolving net cylinder G and pressure rollers L L L L.

Claim.—The employment of the revolving feeding net cylinder G, in combination with the two sets or circles of rollers F F, and L L, one set of said rollers being allowed to yield when the clothes are drawn round the net cylinder, and

between the two sets of rollers, as described; for the purpose of washing clothes, and fulling and flocking cloths.

No. 9,668.—CHARLES GOODYEAR, of New Haven, Conn.—*Improvement in manufacturing Articles composed of Gutta Percha, &c.*—Patented April 12th, 1853.

This invention consists in using or employing sand, pulverized soapstone, plaster, or some similar granular or pulverized or porous matter, or moulds made of porous substances, to sustain and keep the form of moulded or modelled articles composed of caoutchouc or its compounds, and other gums, during the process of vulcanization, in proper shape and form. The caoutchouc or other gums are taken in a green state, and formed into the exact shapes desired, then covered with pulverized soapstone, or other similar granular adhesive powder; they are placed in a box and heated to 200° or 300° Fahr. from 3 to 7 hours, when the articles are vulcanized.

Claim.—The above description sets forth the claim of the inventor substantially.

No. 9,669.—CULLEN WHIPPLE, of Providence, R. I.—*Improvement in Shaving the Heads of Screw Blanks.*—Patented April 12th, 1853. Antedated November 30th, 1852.

This invention relates to the method of shaving the heads of screw blanks, and consists in moving the cutter that performs this operation against the head of the blank, in either a curved or straight line, but always in a direction oblique to the axis of rotation of the blank, and in or nearly in a line with the under side of its head, so that the pressure of the cutter against the blank may be mainly in the direction of its length, thus avoiding the great tendency to force it out of the jaws by lateral pressure, which always exists, when the tool approaches it at right angles to its axis of rotation; by which arrangement the use of a rest is dispensed with, which insures the production of a round head on the blank, whether the wire of which the blank is made be round or otherwise.

Claim.—The method of shaving the heads of screw blanks by causing the cutter to approach the blank obliquely, and in or nearly in a line with the under side of the head, whereby the use of a rest to support the blank against the pressure of the cutter is dispensed with.

No. 9,670.—FRANCIS A. CALVERT, of Lowell, Mass.—*Improvement in the Feed Motion to Willowers.*—Patented April 19th, 1853.

The distinguishing feature of this improvement consists in using, in connexion with what is usually known as the Oldham Willower, a set of feed rollers, to which an intermittent motion is imparted, so as to feed the cotton to the cleaning cylinder in allotted quantities, from time to time, and distribute it evenly over the cylinder; by which it becomes more quickly and thoroughly cleaned than when the said allotted quantities are fed in by hand, in the manner now practised.

Claim.—The combination of a set of feeding aprons having an in-

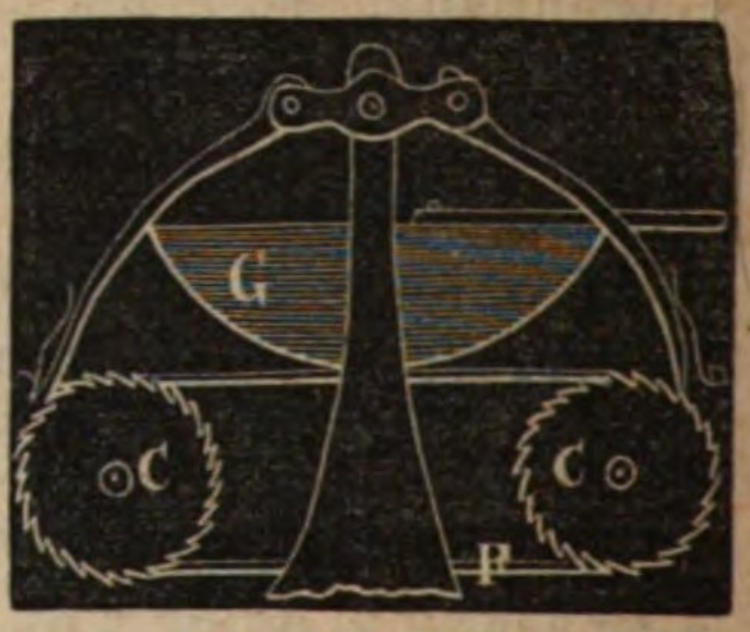
termittent motion imparted to them, with the cleaning cylinder, for the purpose above set forth.

No. 9,671.—James M. Cook, of Taunton, Mass.—*Improvement for Excluding Dust from Railroad Cars.*—Patented April 19th, 1853.

This improvement consists in the construction and application of a deflector, made to extend vertically up against the outside of the window, and horizontally underneath the window; the vertical part being seen at *a*, the horizontal at *b*. The guard projects about six inches from the side of the car.

Claim.—The above description and cut fully set forth the claim of the inventor.

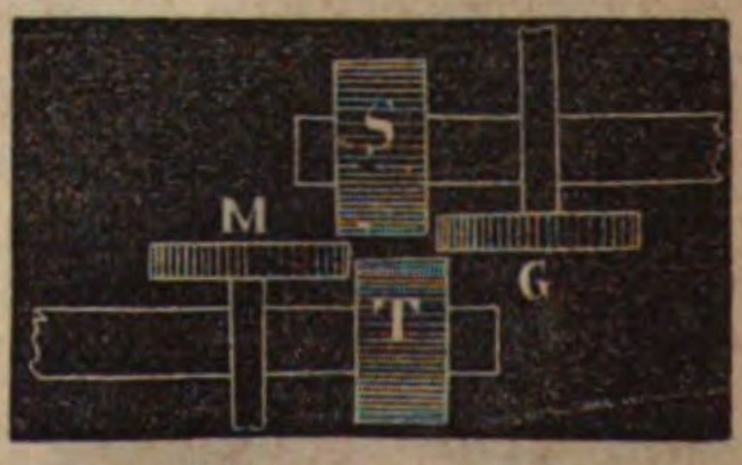
No. 9,672.—Phineas Emmons, of New York City.—*Improvement in Machines for Planking Hat Bodies.*—Patented April 19th, 1853.



This improved machine is constructed of a box or trough, in which two rollers (see fig.) are placed, and over which passes an elastic endless apron F; and combining the same with a circular faced rubber G, arranged on a rock-shaft, so as to produce a rolling and pressing of the hat body as it passes through the machine, in consequence of a revolving and vibrating motion being given to the endless apron, by pawls working from a cross-head on the rock-shaft, and operating ratchet wheels c c on the carrying rollers of the endless apron F; thereby producing an effect analogous to that obtained by shrinking or sizing wet bodies by hand.

Claim.—The combination of a reciprocating rotary rubber or presser, with an endless elastic apron, so that by vibrating the rubber, a reciprocating, intermittent, *differential* movement is given to the apron, thereby operating on both sides of the body, and working it forward at the *same* time.

No. 9,673.—James S. Hartupee and Abram Alexander, of Pittsburg, Pa.—*Improvement in Machines for Rolling Bar-Iron.*—Patented April 19th, 1853.



This invention or machine consists in the application of four rollers for expanding bar-iron, the rollers having their axles movable, so as to expand or contract the space comprised between their faces, and thus render it equally appropriate for the fabrication of different sized bar-iron. The rollers are combined or applied as seen in the figure; S and T are horizontal, and G and M are the vertical rollers.

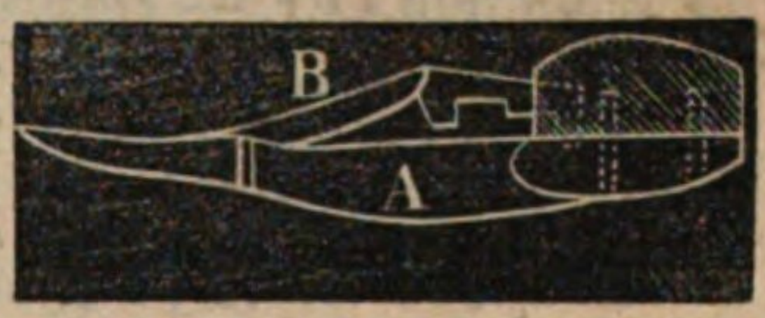
Claim.—The combination of the four rollers in such a manner that by raising or lowering the upper roller s (to form a thick or thinner bar), one of the vertical rollers will be raised or lowered with it, and at the same time the peripheries of all the rollers be kept in contact, and in their proper relative positions to each other; and also by moving the lower roller T endwise in its bearings, to make a narrower or broader bar, the vertical roller will be moved laterally with it, and all the rollers be kept in contact.

No. 9,674.—ALEXANDER MCPHERSON, of New York City.—*Improvement in Stoves and Ranges.*—Patented April 19th, 1853.

The nature of this invention consists in combining the construction of the grate with the mode of carrying the flues down the ends of the range and under the oven.

Claim.—The arrangement of the vertical end flues, and diagonal cross-plate under the oven, for causing the gas to traverse the entire surface of the oven of the cooking range.

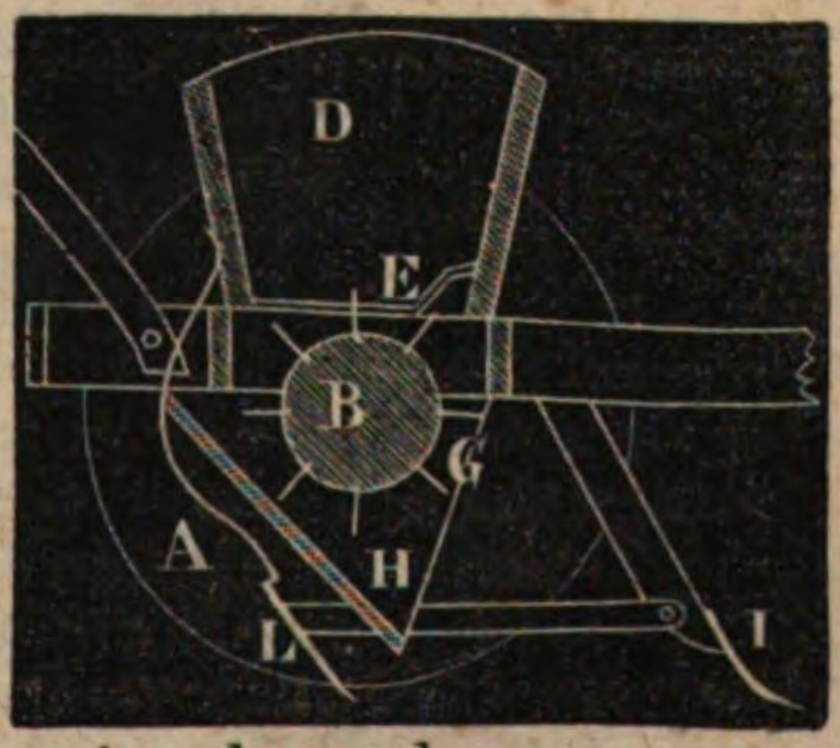
No. 9,675.—JOHN H. MANNY, of Waddam's Grove, Ill.—*Improvement in Cutter-Fingers of Harvesters.*—Patented April 19th, 1853.



The cutter-finger is made of two pieces distinct, A and B, one above the other. The cutter plays between these two parts. The object of this invention is to keep the cutter and fingers clear of all impediments, as wire-grass, straw, grain, or grit, in the openings through the fingers which form the race or guide of the reciprocating cutter.

Claim.—Constructing the lower part of the finger, or the upper, or both, with a recess on either side in front of the finger-bar, and an angular ridge between the two recesses, to cut entangled fibres, whereby the clogging of the cutting apparatus is effectually prevented. Also, constructing the fingers so that the sides of the upper half will overhang those of the lower half, the cutter playing between the two.

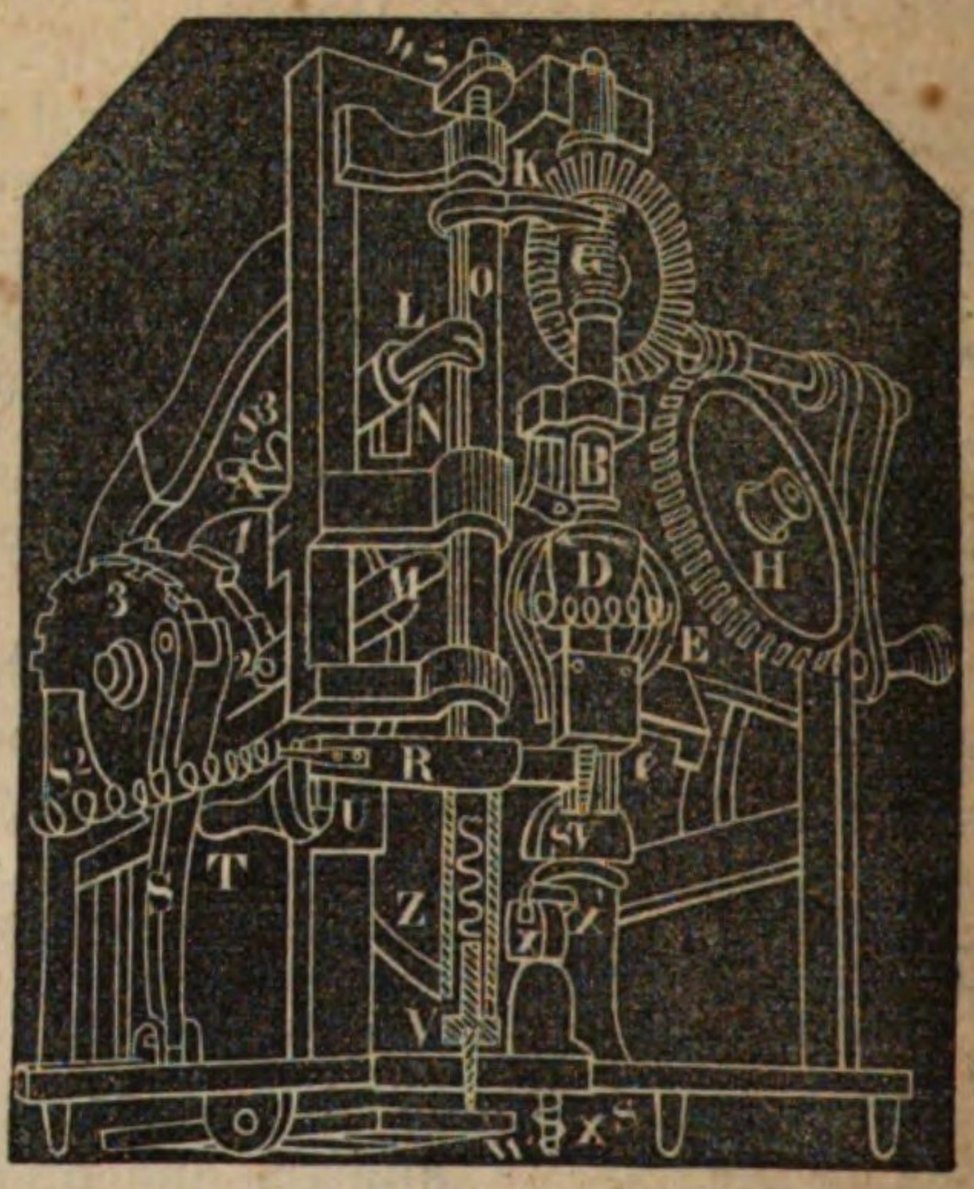
No. 9,676.—SAMUEL MILLER, of Washington College, Tenn.—*Improvement in Cotton-seed Planters.*—Patented April 19th, 1853.



The annexed figure represents a section of this planter. The wheels A are attached to axle B; in the hopper D are ribs or slats E, through which the teeth or spikes G of the cylinder B pass, for the purpose of forcing the seed out of the hopper or seed box. After the seeds are forced out they fall upon a guide or hopper H, and then into the furrow opened by plough I. Two shovel ploughs L, which straddle the furrow, throw the earth back into the furrow, covering the seed.

Claim.—The combination of the open or latticed bottom of the seed hopper, with the teeth on the axle passing through them into the hopper for the purpose of drawing or forcing out the seed, so that they may be drilled into the ground.

No. 9,677.—THOMPSON NEWBURY, of Taunton, Mass.—*Improved Machine for Pointing and Threading Wood-Screws.*—Patented April 19th, 1853.



This machine is too complicated to permit of a concise description. A full description would be too voluminous for this Report.

Claim.—The detached tool posts, combined and arranged with the comb-arm and arm for carrying the threading tool.

No. 9,678.—AMASA WOOLSON, of Springfield, Vt.—*Improvement in Gig Mills, for Dressing Cloth.*—Patented April 19th, 1853.

The operation of this machine is as follows: At the commencement, one end of the cloth is secured to the roller *b*; it is then passed over the rollers *a*, as indicated by the dotted line in the figure, coming twice in contact with the surface of the main drum c, and passing beneath the rollers *a'*, is wound upon the other roller *b'*. The machine being now set in motion, the lever w is moved so as to bring the wheel s into gear with the wheel *d*, the latter is revolved in the direction indicated by the arrow, and the cloth is wound upon the beam *b*, and unwound from *b'*; the main drum c in the meantime, revolving rapidly, comes in contact with the cloth as it passes at the points *b b''*, and the teaselling is effected. In order to the more perfect performance of this operation, it is necessary that the surface of the cloth be operated upon by the teasels longitudinally in both directions. For this purpose the cloth is detached from one of the rollers *b* or *b'*, and entirely wound upon the other; the auxiliary carriage is then revolved, reversing the positions of the cloth rollers *b*, *b'*, and the cog gearing *d*, *e*. The operation is thus reversed.

Claim.—A gig-mill or other machine for dressing cloth, with the cloth rollers hung in a revolving carriage, or its equivalent, by means of which the cloth is run in a reversed direction through the machine

without the necessity of unwinding it from and rewinding it upon the cloth rollers, as herein before practised.

No. 9,679.—William Wickersham, of Lowell, Mass.—*Improvement in Sewing Machines.*—Patented April 19th, 1853.

The claim of the inventor will enable those acquainted with sewing machines to understand this improvement.

Claim.—The combination of a single needle and two thread guides (carrying separate threads), so operated that during one passage of the needle through and out of the cloth or other material to be sewed, one of the guides shall lay its thread in the hook of the needle, each guide acting alternately. Also, making one of the guides with a long slot, for receiving the thread in its passage to and through the other guide.

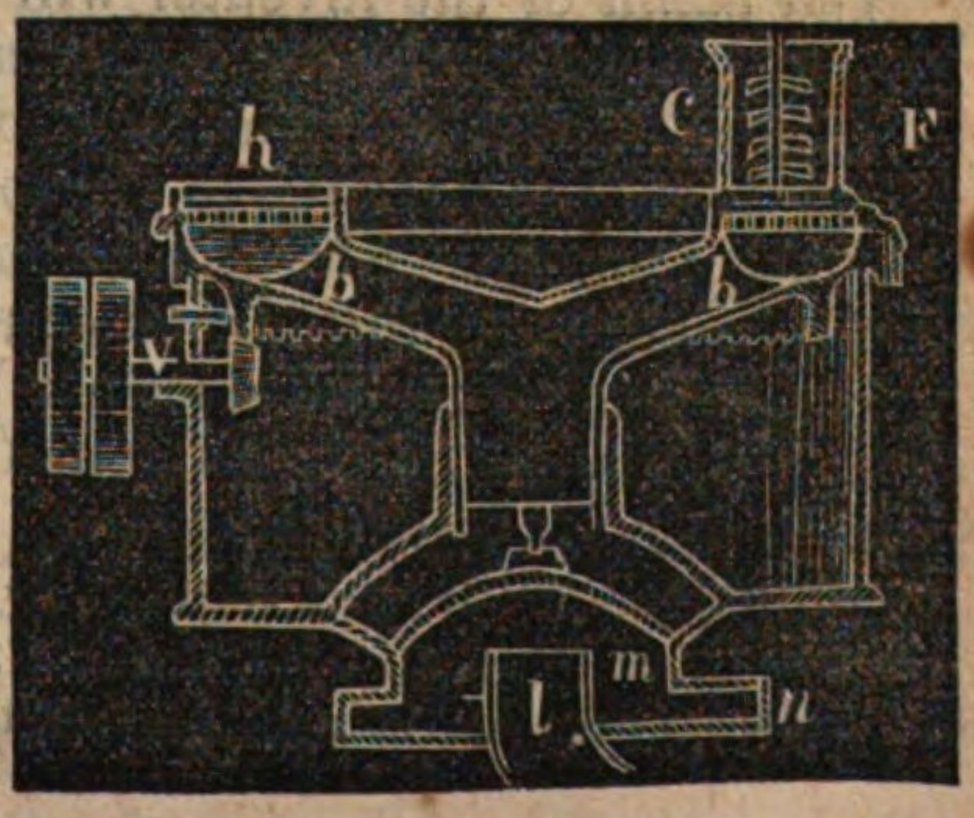
Also, the peculiar mode of sewing cloth or other material by combining two threads with the fabric, by drawing them through each other's loops, interlooping them in plegma stitches, so that the threads alternately bind each other. Also, the improved arrangement of applying the closing slide of the hooked needle to the same side as the barb or hook, so that it may slide in a groove in the needle or carrier, parallel to the motion of the needle, in the manner and for the purpose as specified.

No. 9,680.—Samuel L. Dana, of Lowell, Mass.—*Improvement in the Mode of Purifying Rosin Oil.*—Patented April 19th, 1853.

The oil is combined with an alkaline, earthy, or metallic base, by heating in an open kettle with constant stirring (one pound of lime to one gallon of the oily product of rosin). This mixture begins to thicken at a temperature of about 230° Fahr., and is thickest at 260° Fahr. It then gradually becomes thin and liquid, and after being kept heated about eight hours, a glutinous mass is formed, at a temperature of about 360° Fahr., which when cooled becomes a plastic substance; this is distilled, and the oil is freed from its peculiar odor and fit to be combined with sperm or other oil for the purpose of lubrication.

Claim.—The above described operation (for the purpose therein set forth) fully covers the claim of the discoverer.

No. 9,681.—Henry Bessemer, of Baxter House, England.—*Improvement in Sugar Drainers.*—Patented April 26th, 1853.

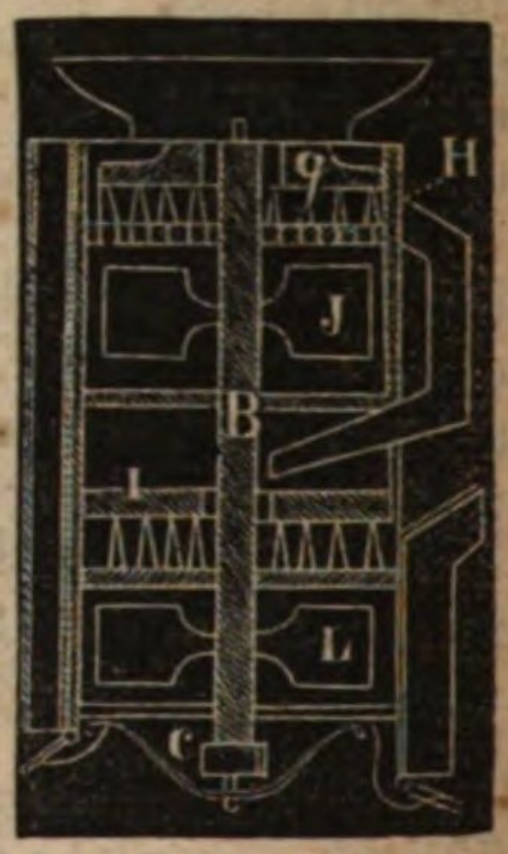


The annexed figure represents a section of the apparatus for carrying into practice this mode of cleansing sugar; *b*, *b*, hollow table; *l*, the pipe for the air pump to form a vacuum; *n*, a pipe connected with the suction pump to carry off the fluid; *h*, wire-gauze surface;

v, shaft with pulleys and cog wheel on the other end for the purpose of revolving the hollow table.

Claim.—The combination of the revolving and hollow spreading table, formed with a wire gauze or perforated top (and connected with an air-exhausting apparatus), the spreading mechanism, the water sprinkling pipe or its equivalent, the means of discharging the water and molasses, and that of removing the cured sugar.

No. 9,682.—SAMUEL COOK, of Brockport, N. Y.—*Improvement in Smut Machines.*—Patented April 26th, 1853.



The cylinder and screening and scouring plates in this smut machine are provided with holes, through which a draught of air is drawn into the machine by fan-blowers J and L, which passes through the holes and brush, and so that, whilst the brush wheels H and I are agitating the wheat or grain on the plates, the draught through the plates will carry off all the finer particles, separating the full wheat from the shrunken, and both from the smaller seeds, such as cockle, chess, &c., and by the same operation divest and separate the wheat from smut and other impurities.

Claim.—The construction, combination, and operation of the fan, screening plate, and brush in the cylinder, and the openings and tubes or pipes leading therefrom; when the fan is placed below and the brush above the plate, so that the blast created by the fan shall be drawn through the plate, and also when the cylinder is provided with discharge openings and tubes for conveying off the full wheat, the lighter grain, and the dust, in separate directions. And this is claimed whether the same be effected in a single cylinder or in two or more, if the construction and operation are substantially the same.

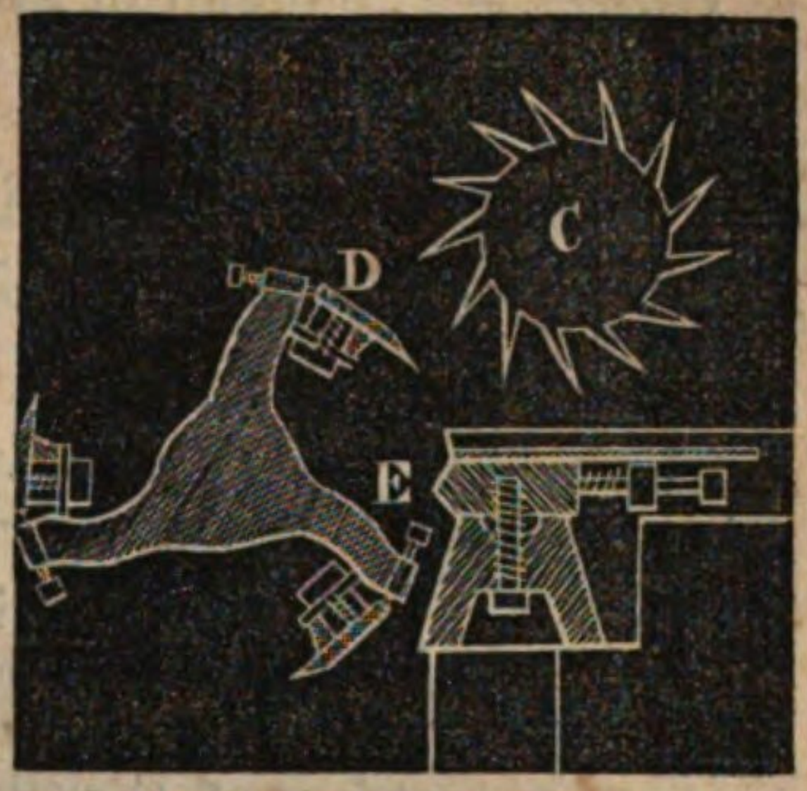
No. 9,683.—EZRA COLEMAN, of Philadelphia, Pa.—*Improvement in Machines for Folding Envelopes.*—Patented April 26th, 1853.

The claim of the inventor will enable those acquainted with similar machines to understand this improvement.

Claim.—The lifter, which acts in the double capacity of taking the paper from the package to the folders, and holding it while the ends are being folded. Also the folders in combination with the pedals, in such a manner as to hold the paper by the end folders pressing it upon the bed while the sides are being folded, the connexion between the pedals being through the medium of racks and pinions, and pulleys, or other analogous devices. Also, the arrangement of a roller in combination with the handle, by means of arms, rock-shafts, and levers, or other analogous device; so arranged that the simple action of raising and lowering the handle distributes the paste. Also, the

roller for the purpose of removing the paper, after it has been folded.

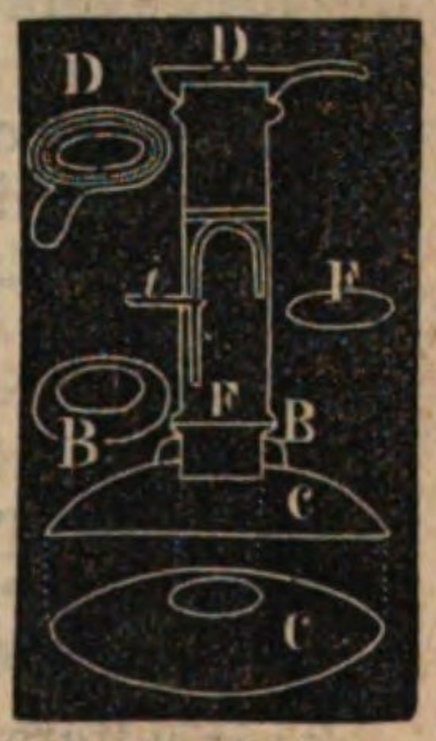
No. 9,684.—Reuben Daniels, of Woodstock, Vt.—*Improvement in Straw-Cutters.*—Patented April 26th, 1853.



The object of this improvement is to adapt this machine to the cutting of brush wood and twigs, with a view to reduce them to a granular state. D represents the straight rotating plates, with set screw; C, the feeding apparatus; E, the adjustable bottom edge.

Claim.—The combination of a series of straight rotating blades, whose cutting edges are equi-distant from and parallel to a common axis of rotation, and hence describe a cylinder when they rotate, with a fixed blade having a curved edge given to it, and corresponding to a line drawn obliquely on the cylinder generated by the rotating blades, and set in a position coinciding with that line; whereby a series of straight knives on a cylinder are made to cut obliquely, or with a shearing cut, by the oblique adjustment of the fixed blade only.

No. 9,685.—William P. Merriam, Norman C. Harris, William Wheeler, and Edwin N. Merriam, of Poultney, Vt.—*Improvement in the construction of Candlesticks.*—Patented April 26th, 1853.



The nature of this invention consists in so constructing candlesticks made of sheet metal as to save the labor and cost of brazing or soldering the parts together, as has heretofore been the mode. Also, in saving the cost and labor of the bolt and nut, used heretofore in attaching the bottom parts to the barrel. Also, in saving the cost and labor of cutting a screw on the stem of the thumb piece, and in the spring and lifter, as formerly.

The barrel is placed in a disk *c* (as shown in the figure), secured by ring B; to prevent the barrel from being forced in there s a plate F, inserted at the bottom of the barrel; the lifter *i* is made with a spring. The top of the barrel is held together by the heading, which is provided with a handle.

Claim.—The mode of constructing candlesticks of sheet metal substantially as described.

No. 9,686.—James Bolton, of Richmond, Va.—*Improvement in Hot Air Furnaces.*—Patented April 26th, 1853.

The nature of this invention consists in packing the space called

the air chamber, between the stove, furnace, or other heating contrivance, and the wall which incloses said chamber, with metallic scraps twisted into a spiral form, or bent into other shapes, so as to allow a space between these scraps for the passage of air, these scraps possessing the property of conducting heat, and absorbing that which is radiated, and of imparting the heat to the air within the chamber.

Claim.—The claim of the inventor embraces the above description.

No. 9,687.—Stephen F. Palmer, of New York, N. Y.—*Improvement in Towing Apparatus for Canal Boats.*—Patented April 26th, 1853.

The nature of this invention consists in arranging a drum or wheel with a winding spring upon its axle, placed in the rear of the usual position of the towing post; the perimeter of the wheel being grooved so as to admit of the tow line being wound upon it, with a brake operated by a lever; whereby the taking in and letting out of the line, and the slacking of the line in passing boats and to assist the team in starting, are regulated, causing the boat to move moderately forward as the line unwinds by the forward movement of the team.

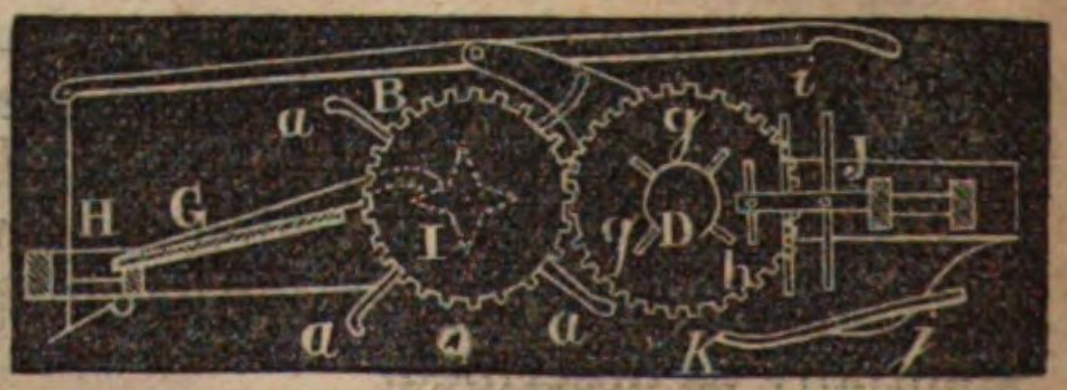
Claim.—The arrangement of the wheel, and the spring wound upon its axle and fastened to the frame, with the brake and the tow line.

No. 9,688.—Thomas J. Sloan, of New York, N. Y.—*Improvement in Machines for Pointing and Threading Screw-Blanks.*—Patented April 26th, 1853.

This invention consists in combining in an organized machine a cutter and its appendages, for forming the point on screw blanks, with the chaser or cutter, which cuts the thread over the shank and pointed part thereof, down to the point.

Claim.—The above literally sets forth the claim of the inventor.

No. 9,689.—Thomas B. Stout, of Keyport, N. J.—*Improved Potato Digger.*—Patented April 26th, 1853.

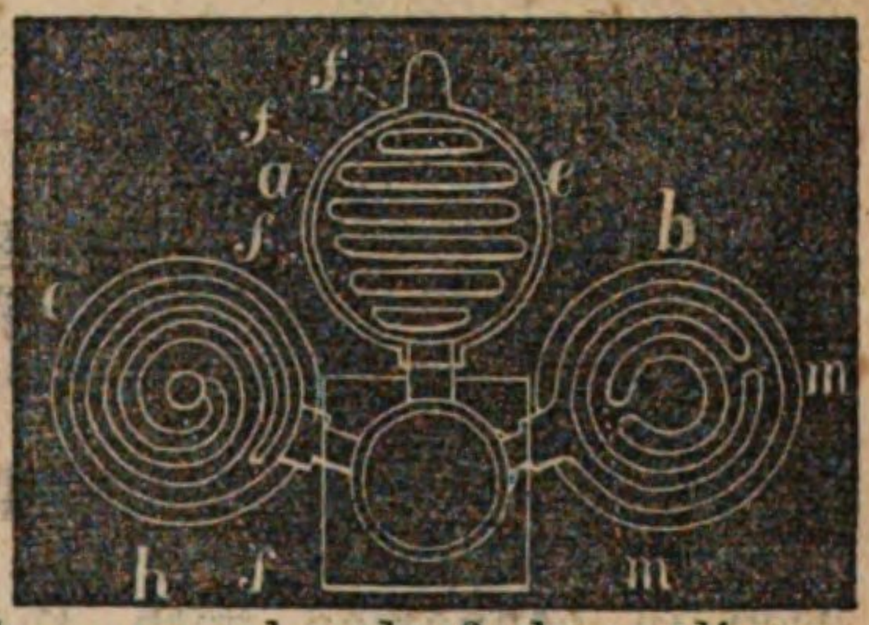


This potato digger consists of a cylinder B (see fig.), having teeth *a a a*, so arranged as to take out the potatoes from the hills or drills. G is an inclined apron which conveys the potatoes into the box H. The apron has a shaking motion, which is given to it by the cam I attached to the side of the cylinder. To the cylinder, also, cog wheels are attached on both sides, which gear into another set of such wheels attached to the axle D, which is provided with teeth *g g*, which mash into teeth *h* on a shaft J placed at right

angles to the axle D, and running longitudinally with the frame. This shaft has beaters *i* upon it, which revolve over a forked cutter K; the beaters force the vines, weeds, or grass against cutting edges at *j* of the forked cutter K.

Claim.—The cylinder B with the teeth *a* attached to its periphery, in combination with the beater *i* and forked cutter K; the cylinder, beaters, and cutter being constructed and arranged in the manner described.

No. 9,690.—SAMUEL D. TILLMAN, of Seneca Falls, N. Y.—*Improvement in Radiators for Stoves.*—Patented April 26th, 1853.



The figure represents three of these radiators differently constructed, and showing the position and shape of the tubes. In radiator *a*, *f f f* represent a series of flattened tubes or pipes arranged within a case *e*, which may be of sheet or cast iron, of cylindrical, square, or other form. These pipes must be made of sheet iron or other metal and extend from the bottom to the upper head of the radiator, and have their edges rounded for the twofold purpose of allowing an unobstructed passage to the smoke draught around one edge, while the other edge presents but a single line of contact with the case *e*, giving the largest surface for exposure to the heating influence.

In the radiator *b*, which is a modification, involving the feature of the sheet iron tubes with the cast iron heads and flanges, these tubes are arranged concentrically, each leaving a vertical space or opening *m m* from top to bottom.

In radiator *c* there is a spiral smoke-flue *h*, and a diminishing air-space *f*, as in *a* and *b*.

Claim.—Having the entrance and exit passages on the same horizontal line with the radiator, or nearly so, and at or about the position of the line of the middle horizontal section of the radiator, when such arrangement of these passages is combined with a series of flattened tubes or air-passages, and horizontally winding smoke-passages. Also, in combination with the vertical air-spaces and smoke-passages formed by the flattened tubes, the successive contraction of the air-spaces; that is to say, the air-spaces varying in thickness, or in the width of their cross-section, as they recede from the source of heat; each tube being of uniform width or thickness throughout, but narrower or thinner than that which precedes it.

No. 9,691.—ALFRED J. WATTS, of Utica, N. Y.—*Improvement in Process for Preparing Gold for Filling Teeth.*—Patented April 26th, 1853.

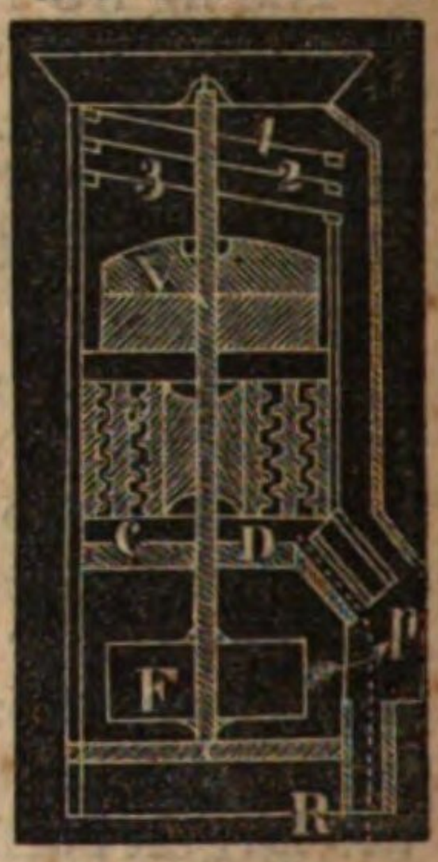
The nature of this invention consists in dissolving gold in mercury,

and, after treatment by heat or otherwise, dissolving out the mercury by nitric acid, and then subjecting the now conditioned but as yet unfinished gold to the action of a particular heat, whereby it is rendered coherent, soft, and malleable, thus fitting it for the purpose of filling teeth.

Claim.—The processes, as described, of preparing or crystallizing gold for the purpose of filling teeth.

No. 9,692.—DAVID MARSH and BENNET WHITNEY, of Fairfield, Conn.—*Improvement in Rice Hullers.*—Patented April 26th, 1853.

The grain is put into the screen 1, which separates the coarser parts, passing through into Nos. 2 and 3, and into the runner v. When the grain has passed the stones, it falls into the dentated cylinder C D. When it is sufficiently beaten, it is discharged through an orifice, and passes off through spout *p*, which carries it through a current of air from the blower F, and finally falls into the receiver R.



Claim.—The two dentated cylinders and the dentated beating-arms running between them, to be used in connexion with the above described machinery.

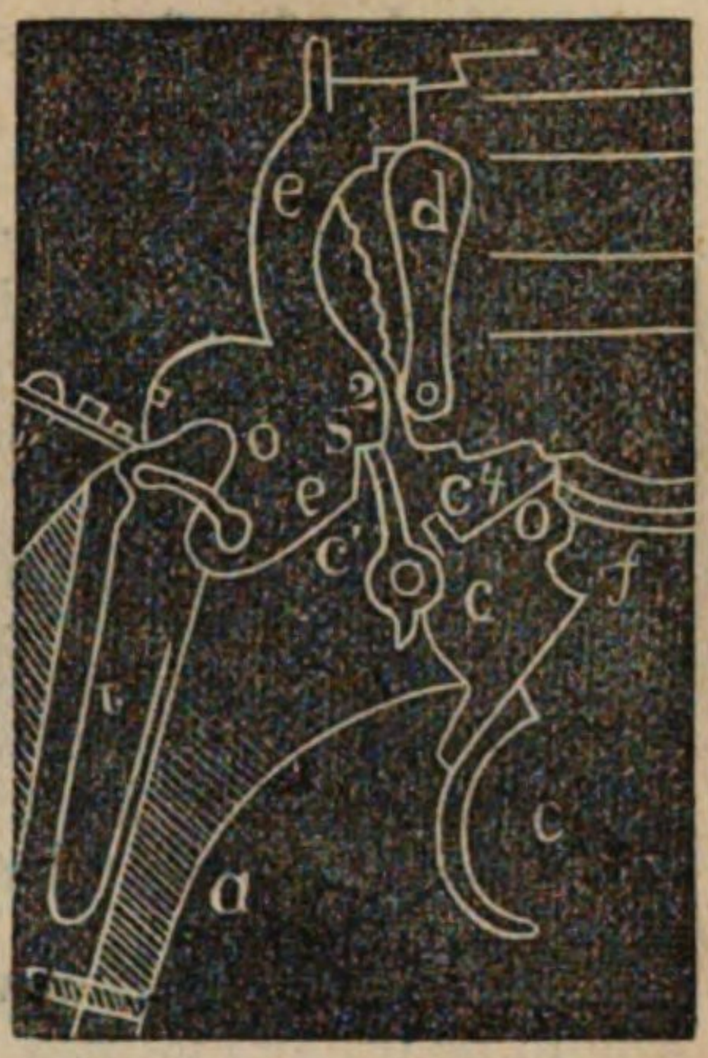
No. 9,693.—CARL LUDWIG GRAN, of Hamburg, Germany.—*Improvement in Cementing Materials for Ornamental Compounds.*—Patented April 26th, 1853.

This compound is made of the curd of milk mixed with 30 per cent. of slaked lime. When in a semi-liquid state, the materials which are to give the character or color are mixed with the preparation of curd and lime. To produce veneers, or imitations of wood, saw-dust or various colored chips are mixed with the cement. When artificial stones are to be produced, fragments of various colored minerals or earth are substituted. Articles, such as ornaments, &c., may be moulded of this preparation or compound, and thus produced at much less expense than carving, &c.

Claim.—The method of making artificial veneers, &c., by combining with saw-dust (of various colors), or the equivalents thereof, the curd of milk, and lime or its equivalent, after these latter have been triturated, and thoroughly mixed, and reduced to a semi-fluid state.

No. 9,694.—ROBERT ADAMS, of London, England.—*Improvement in Revolving Fire-arms.*—Patented May 3d, 1853.

d, a spring bolt, when pressed forward, comes against a suitable



shoulder, or recess, formed on the hammer head, and retains it back while the revolving chambers are being charged. c^4 is a stud on the trigger, which enters any of a series of recesses to retain the magazine in place while the discharge occurs. When the trigger is pulled back, the sear c' lifts the hammer to a sufficient height for the action of the main-spring j to give it sufficient force to explode the cap, and the sear c' is thrown out of the recess e' by the projecting angular part of the cock, when the cock is forced back to the fullest extent.

Claim.—Combining with the frame *a* and the hammer *e*, the spring *d* for holding the hammer back. Also, the sear c' attached to the trigger by a swivel joint and acting on the hammer *e*. Also, the stop or projection *c* on the trigger for holding the chambers in position when firing.

No. 9,695.—Richard L. Hinsdale, of New York City.—*Improvement in Elastic Exercising Machine.*—Patented May 3d, 1853.

This machine consists of elastic bows (which are applied in such a manner as to sustain the person exercising, and tend to strengthen the muscles of the body, and expand the chest of the operator), and a spring platform and elastic reciprocators.

Claim.—The bows on their hubs, and the string and handles, either alone or in combination with the spring and vibrating platform, as described. Also, the elastic reciprocators. And thirdly, the bows on the brackets, or their equivalents, either alone or in combination with the spring platform, for the purposes of vertical exercise.

No. 9,696.—George Kendall, of Providence, R. I.—*Improvement in the Manufacture of Candles.*—Patented May 3d, 1853.

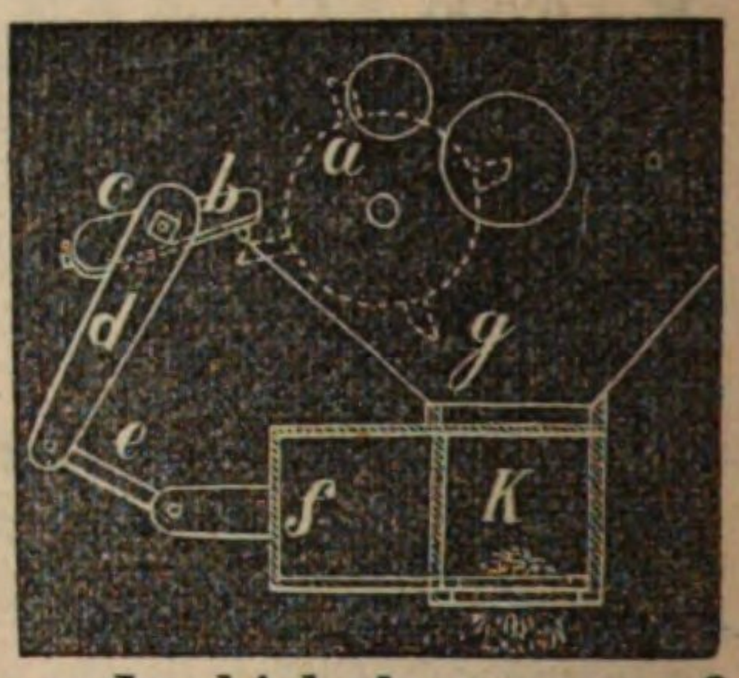
The object of this improvement is to diminish the manual labor and expense of moulding candles, and to perform many of the nicer parts of the operation automatically; which is accomplished by mounting the moulds upon cars, which run on cross railways on the floor of the moulding room. By running the car into an oven, the moulds are heated to about the temperature of melted fat, then carried by the car to a cauldron of melted fat and filled, and then run to one of the empty tracks; after standing until cool, they are removed upon the car to an apparatus by the aid of which the candles are drawn at one operation, and the moulds rewicked. To facilitate the transference of the moulds, the cars are carried about on trucks fitted with rails at right angles to the track on which they run, so as to be moved in any direction desired.

Claim.—The arrangement of the travelling and fixed railways, in combination with an oven for heating the moulds, a melting pot to

prepare the fat for casting, and apparatus for drawing the candles from the moulds.

Also, in combination with a series of moving stands of moulds, the counterpoised hooks or their equivalents arranged and operating to aid in drawing the candles and centring the wick in such manner as to dispense with much of the care and skill heretofore required for the performance of this operation. Also, an elastic or yielding cap for the lower end or tip of the moulds, which performs the two functions of stopper and friction-brake to stretch the wick. Also, the wick clamp.

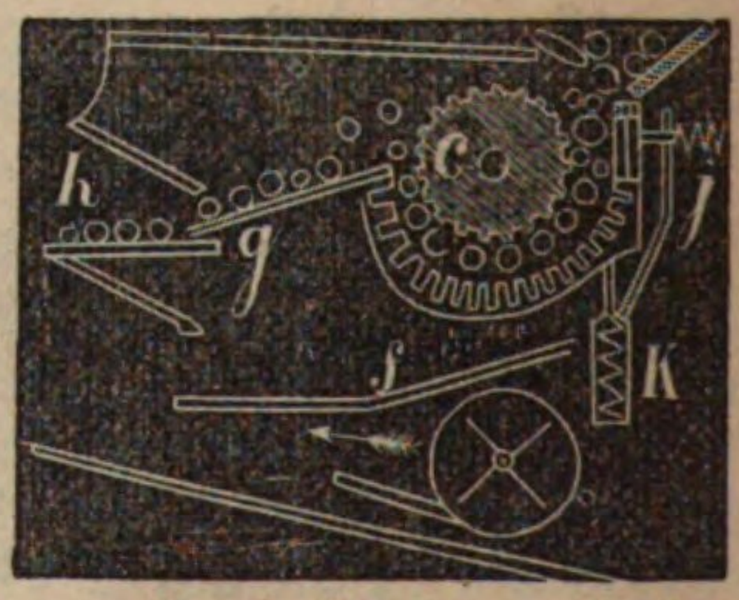
No. 9,697.—Daniel Reid, of Washington, N. Carolina.—*Improvement in Manure Carts.*—Patented May 3d, 1853.



The object of this invention is to spread guano or other manure equally on the surface passed over by the cart, or to deposit the same in hills at regular intervals. This is accomplished by having on the axle on one side of the cart a small wheel *a*, with projections *g* on its rim; in the rear of this wheel there is a bar *b*, with a spring. This lever-bar is on the axle *c*, on the middle of which, and in the rear of the middle of the cart, is a fixed arm *d*, which, by means of another arm *e*, works the feeding or measuring box *f*. The box K has one half of its bottom open, from which the charge is dropped into the hill.

Claim.—The measuring valve apparatus beneath the lower hopper, in combination with the said hopper, for discharging manure as set forth, &c.

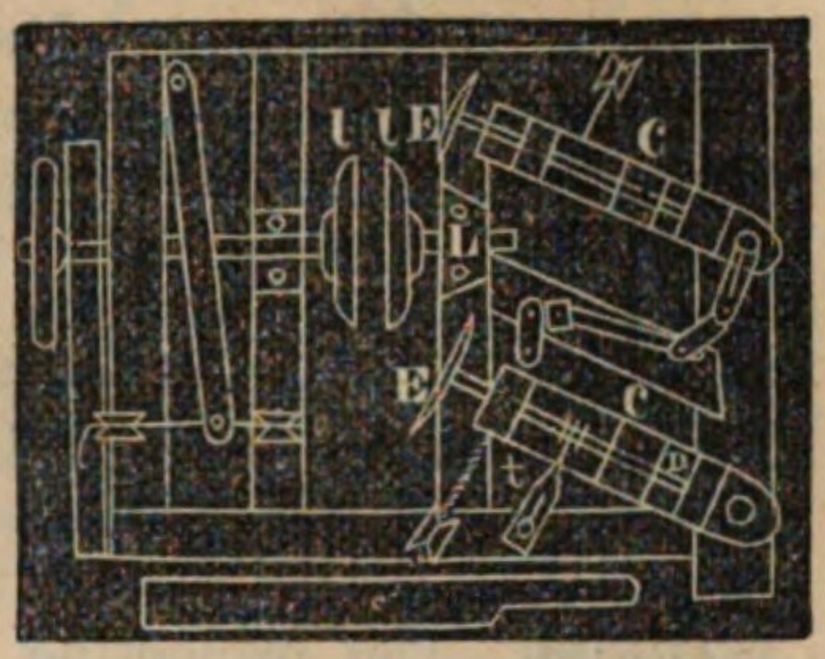
No. 9,698.—George W. Reid, of Evansville, Ind.—*Improvement in Corn Shellers.*—Patented May 3d, 1853.



This improvement consists in forming the feed hopper, shelling concave, and separator, in one connected and self-adjustable piece; and in the peculiar construction of the screens for the separation of the cobs and other refuse: *c* is the cylinder, *j* the concave, *k* the vertical spring, giving the concave complete mobility. The grains fall from the concave upon the conducting shute *f*, and the cobs are rolled around between the cylinder and the concave, and thrown upon the combined screens *g* and *h*.

Claim.—The combination and arrangement of the sloping longitudinal slat-screen *y*, and the transverse slat-screen *h*, for the rapid and thorough separation of the corn from the cobs, as they are thrown from the concave by the shelling cylinder upon these screens.

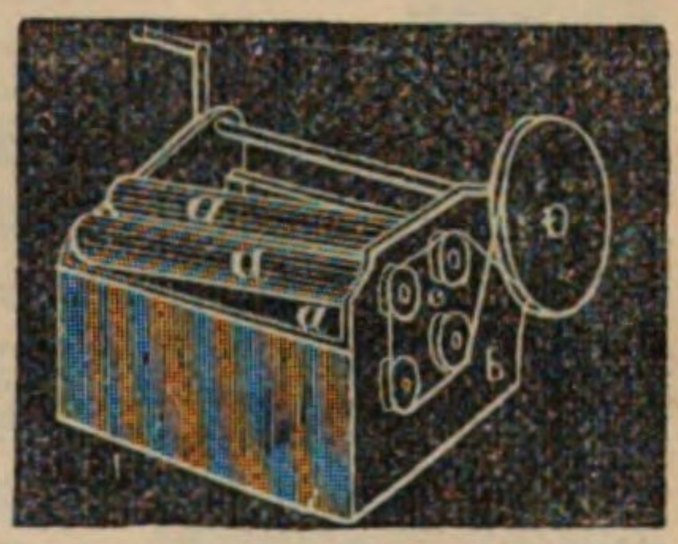
No. 9,699.—Paris J. Steere, of Cheshire, Mass.—*Improvement in Machines for Sawing Barrel-Heads.*—Patented May 3d, 1853.



In this machine the barrel heads are cut by two dishing circular saws, which are brought in contact with the stuff to be cut, one forming the short or upper bevel of the head, and the other the long or lower bevel.

Claim.—The finger *t* in combination with the movable shaft D, for the purpose of converting the curvilinear motion of the saw into a rectilinear motion.

No. 9,700.—James S. Taylor, of Danbury, Conn.—*Improvement in Machine for Shrinking Hat-Bodies.*—Patented May 3d, 1853.



This machine consists of any suitable number of rollers placed nearly horizontally upon a frame or vat, and so arranged as to form a cavity between them, of sufficient size to receive the hat when rolled up, after having been partially felted. *a a a* are the rollers, *b* the vat, and *c* the cavity. The rollers are provided with pulleys, and are driven by means of a cross-band.

Claim.—The process of shrinking or sizing the hat bodies, by passing them longitudinally into or through a chamber, formed by placing several cylinders or rollers (having concave or other denomination of surfaces) in such a proximity as to form the said chamber.

No. 9,701.—Charles N. Tyler, of Worcester, Mass.—*Improvements in Repeating Fire-arms.*—Patented May 3d, 1853.

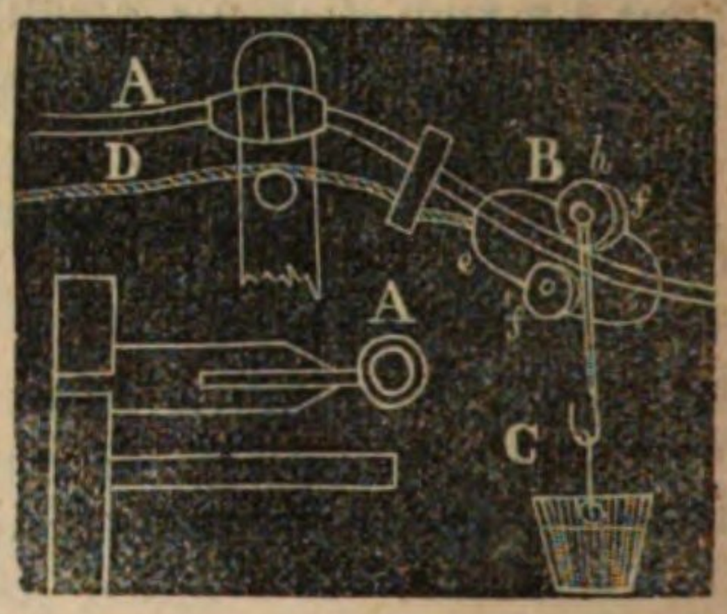
The principal object of these improvements is to include or bring the whole lock (except the trigger) in so small a compass as to be contained within the stock.

Claim.—Arranging the cock in such a manner that it may be raised, and will stand up without being held by a sear or catch, and may then be gradually lowered again, without tripping, to fire the charge, or may be tripped to fire the charge, at the option of the operator.

Also, the movable stop, operated upon by a stud or button protruding through to the outside of the stock, in combination with the fixed rest and the jack, for the purpose of preventing the jack being thrown far enough back to clear the tongue through which the trigger acts upon it, whereby the escape of the driver or hammer is rendered impossible while the stop is in operation.

Also, the magazine constructed with a self-acting driver which places the cartridges in succession in front of the discharger; and with a discharger that will draw itself back, and place the pulling-rod in the proper position for transferring the cartridges into the breech, so that they may be transferred as required, by simply pressing with the finger upon the pulling-rod.

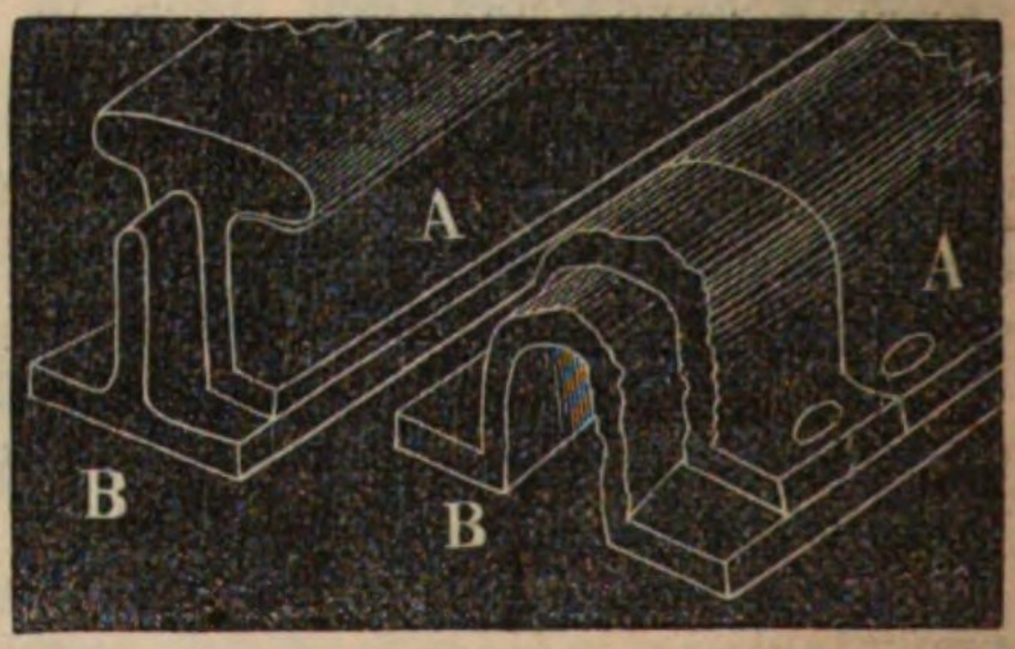
No. 9,702.—Samuel R. Wilmot, of New Haven, Conn.—*Improvement in Apparatus for Drawing Water and Conveying it from Wells, &c.*—Patented May 3d, 1853.



This apparatus consists of a bucket, suspended from a car running upon a curved wire track A (see fig.), the car B and bucket C being operated by means of a cord D, fastened at one end to the car, and held by the operator at the other. The figure represents the mode of fastening the wire to the post.

Claim.—The projecting stud *p*, in combination with the spring *e*, and grooved pulleys *f f*, for the purpose of contracting the spring *e* by the weight of the bucket, and causing the pulleys to grasp firmly the way.

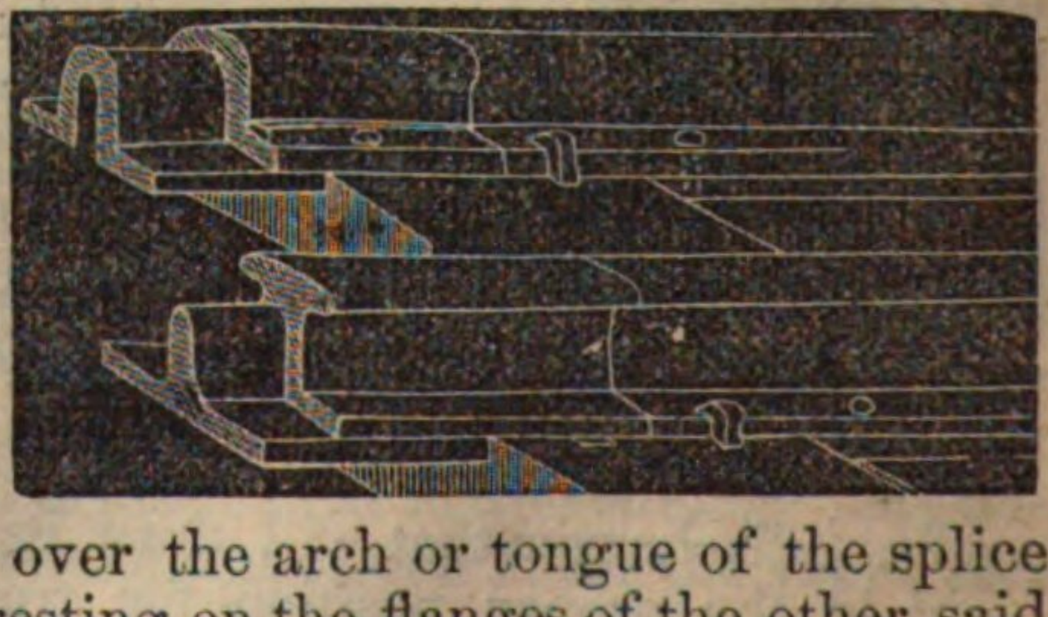
No. 9,703.—Patrick O'Reilly, of Reading, Pa.—*Improvement in Rails for Railroads.*—Patented May 3d, 1853. Antedated November 3d, 1852.



The improvement consists in dividing the ordinary bridge, or any other rail having a flanged base, by a longitudinal division parallel, or nearly so, to the top of the flanges and arch, and the sides which join the arch and flanges, into two layers, plates, or half rails, of nearly equal thickness and weight. One is applied to the other by sliding the upper one over the under one, until the end of one is opposite the middle of the other, and then riveting or otherwise fastening them together in this position, so that they will reciprocally break joint with and support each other, thus giving greatly increased stiffness and strength to the track.

Claim.—The inventor's claim substantially embraces the above description.

No. 9,704.—J. Dutton Steele, of Pottstown, Pa.—*Improvement in Rails for Railroads.*—Patented May 3d, 1853.



The nature of this invention consists in making a rail of two parts, and which is composed of a flanged bridge or U-shaped rail of usual form, resting on an interior rail or splice plate of similar external form; the under side of the arch of the exterior rail forming a groove to fit over the arch or tongue of the splice plate, and the flanges of the one resting on the flanges of the other, said flanges being fastened together by rivets. This rail has a double bridge and double base so far as the interior rail or splice extends.

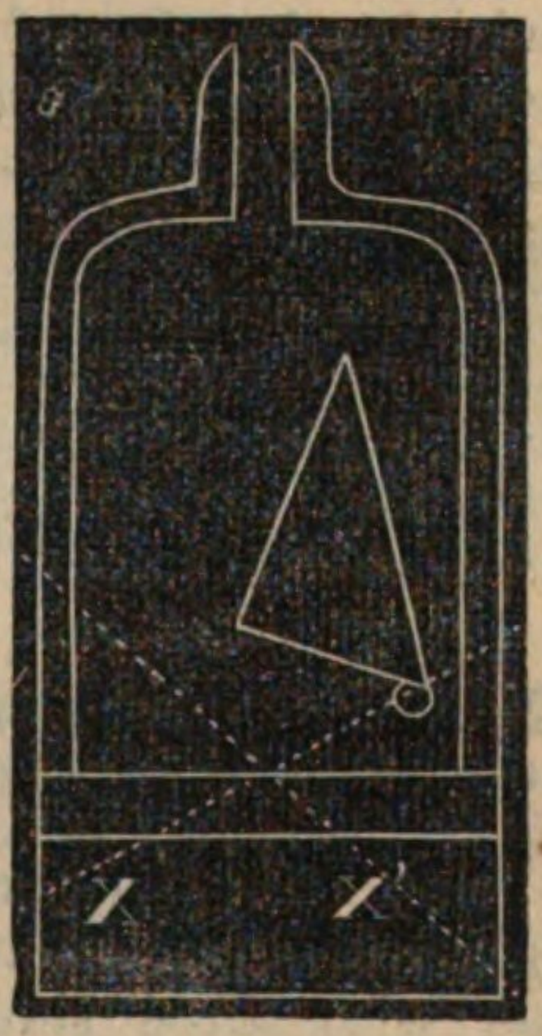
Claim.—The invention above described, whether the splice be longer or shorter, or the tongue or rib be hollow or solid.

No. 9,705.—ASAHEL G. BACHELDER, of Lowell, Mass.—*Improvement in Countersinks.*—Patented May 10th, 1853.

The nature of this invention consists in a collar with a cutting lip on one end; the collar is provided with a set screw, so as to fasten it in the position desired upon bits or other instruments for boring, so as to countersink or ream the hole when it is bored to the desired depth, at one operation. *a* is the collar with the cutting lip.

Claim.—An independent countersink so constructed that it may be used on different sized bits or other instruments for boring, for the purpose of countersinking, as well as gauging the depth of the hole, at the same time it is bored.

No. 9,706.—NEHEMIAH DODGE, of New York, N. Y.—*Improvement in Pump Valves.*—Patented May 10th, 1853.



This improvement consists in forming an arched valve, the curvature of which is the same as that of the barrel of the pump. Its form may be thus described: Suppose two planes inclined to each other, passed through the barrel of the pump, then the lines x x will represent in projection the seats of this curvilinear valve.

Claim.—An arched valve, formed by passing two planes, inclined to each other, through a semi-cylinder of the same diameter with the bore of the pump—the sectional valve thus formed being hinged by one vertex to the interior of the bore.

No. 9,707.—EVAN L. EVANS, of Hartford, Conn.—*Improvement in Washing Machines.*—Patented May 10th, 1853.

This machine is constructed of two rubbers, which are suspended on brackets, the brackets being suspended from a cross-bar sustained by frames. One of the rubbers is secured to the lower end of the bracket, while the other is suspended on a similar bar, which is secured to the main bar by a hinge which allows the rubbers to be drawn together or forced apart by the operation at pleasure. The operation is performed by means of an apparatus adapted to that purpose. These rubbers act in combination with other rubbers corresponding to them, which are placed directly under them, one of which is secured firmly to a bar, while the other is allowed to slide freely on the same surface, which admits of its being drawn away from the one which remains stationary (which is done by means of a spring), or forced against it by means of a treadle and pulley. The bars on which the rubbers are secured are supported by means of spiral springs under them, which

allow the bars and lower rubbers to be depressed at pleasure, by means of a handle provided for that purpose.

Claim.—The combination of the rubbers and rod or handle for opening and closing the rubbers, it being the same handle with which the rubbing is performed.

Also, the combination of the two pairs of rubbers, with the rubbers and the bars, so that the two pairs of rubbers shall each of them grasp the cloth and rub it between them.

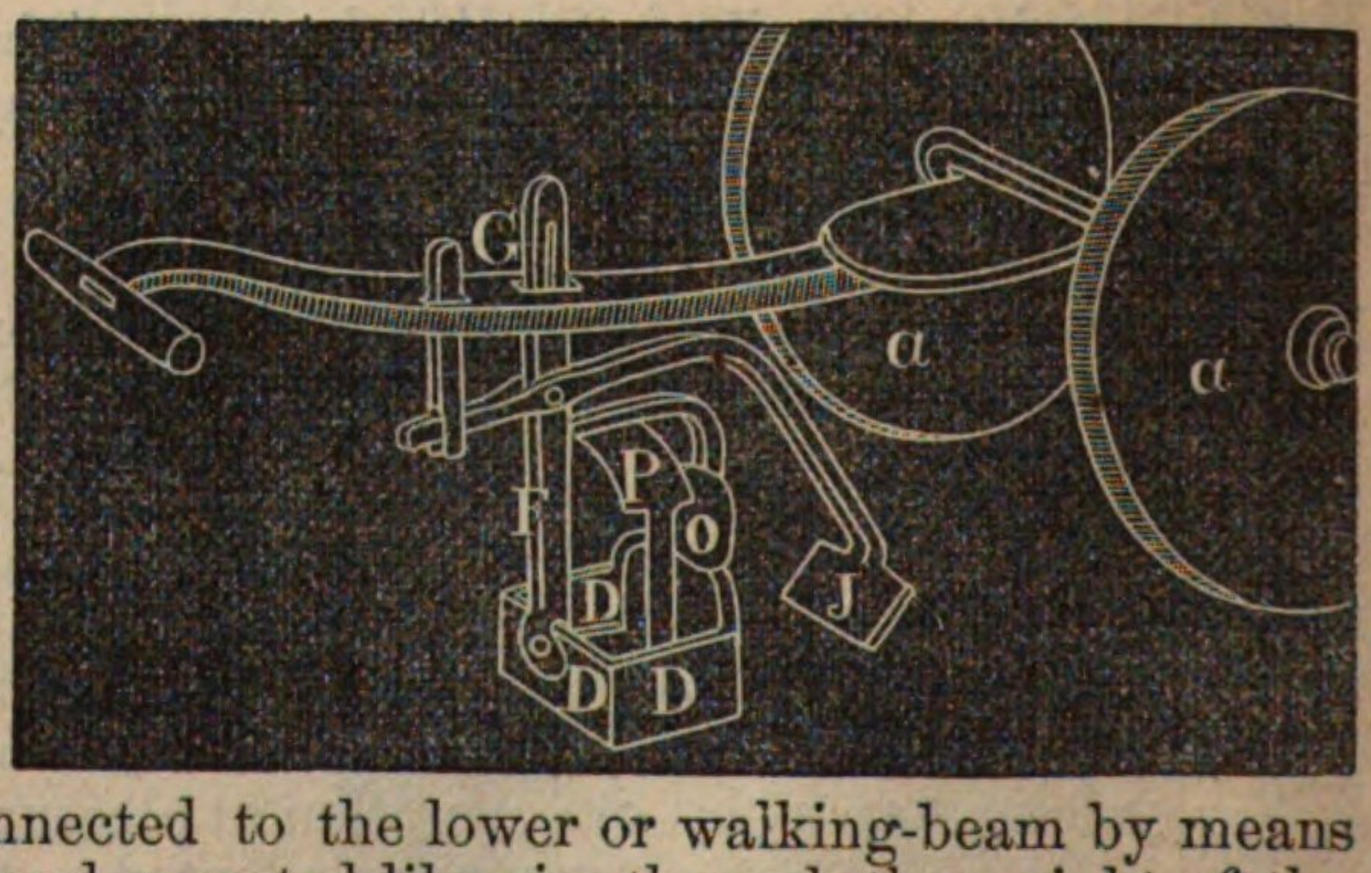
No. 9,708.—THOMAS S. MINNISS, of Meadville, Pa.—*Improvement in Invalid Locomotive Chairs.*—Patented May 10th, 1853.

(This improvement is sufficiently explained by the claim, which conveys a general idea of it.)

Claim.—The combination of the wheel, axle, and shank on the end of the projecting arm, by which a central support is given to the frame within the dish of the wheel—the bearing in the hub being central with the bearing of the rim, permitting a free lateral movement to the wheel, without changing its point of support to the frame, and enabling the wheel to receive any shock on its rim with firmness, while its plain surface is left unobstructed from the free movements of the crank and handle.

Also, the arrangement of the adjustable handle, which can be used to pull the chair, or as a guide in the hands of the invalid; when he wishes to propel himself with his own hands. (This machine may be constructed of wood, iron, or other material.)

No. 9,709.—JONATHAN W. MORRILL, of Hampton Falls, N. H.—*Improvement in Ditching Machines.*—Patented May 10th, 1853.



This invention consists of a hollow cutter with three sides or vertical cutting edges, open at the top and bottom and one of the sides. In connexion with this cutter is a spade, turning on a fulcrum pin passing through the handle of the cutter, which is also connected to the lower or walking-beam by means of a connecting link, and operated likewise through the weight of the operator applied to the lever or beam. The spade is intended for cutting underneath the sod, and is made to enter the open end of the box-shaped cutter. (See fig.) *a a* are the wheels for propelling the machine; D D D, square box of cutter; F, vertical handle passing up through the slot G of the beam; J, the spade; O P are thin strips for guiding the first sod as it is raised by the second sod, and also for throwing it on the side of the ditch.

Claim.—The employment of the swinging cutters D D D, in combination with the swinging spade J.

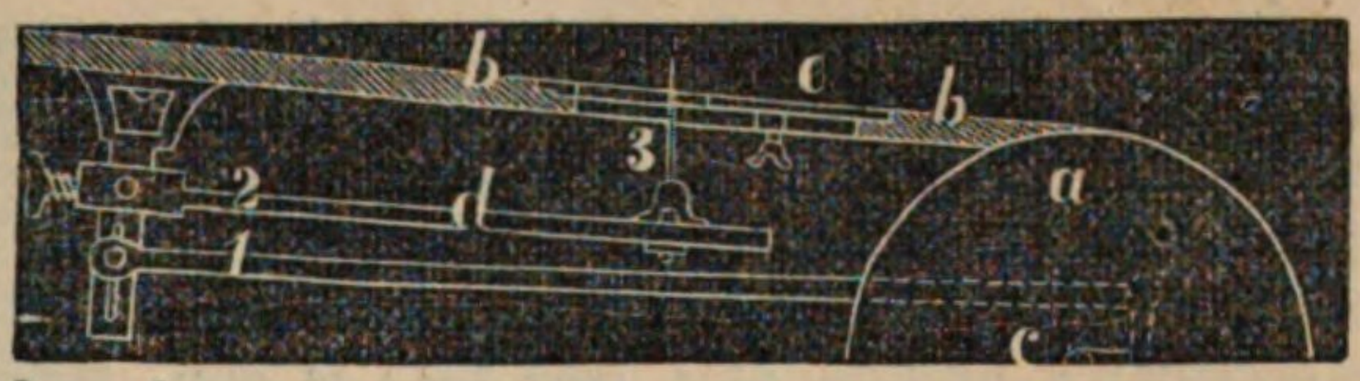
Also, the combination of the swinging cutters, swinging spade, and lever.

No. 9,710.—ENOCH OSGOOD, of Bangor, Me.—*Improved Mode of Fastening Leather Belts.*—Patented May 10th, 1853.

The object of this improvement is accomplished by the employment of metallic hooks and eyes, on tapering screws, inserted into the edges or ends of leather belting, and by this means uniting the ends of the belting closely, and making it run smoothly.

Claim.—The application of the tapering screws with hooks and eyes, screwed into the edges or ends of leather belting, for the purpose of uniting the edges together as above described.

No. 9,711.—JOHN W. RICHARDS, of Hoboken, N. J.—*Improvement in Registering Apparatus for Printing Presses.*—Patented May 10th, 1853.



The nature of this invention consists in permitting the registering points to be passed through the feed-board at any point within a given area; which is accomplished by means of a circular plate of a size to include within its circumference all the area necessary for registering with a given sized press. One of these plates is introduced on each side of the feed-board, near its lower edge, and set into a circular rebate, flush with the surface of the feeding-board; and each plate has a radial slot passing through it and running across the plate a little further than the centre thereof. By rotating this plate, an opening at any position can be obtained within the circle, for the passage of the registering points. The figure represents a vertical section of the apparatus: *a*, the impression cylinder; *b*, the feed-board; *c*, a cam connected with a rod 1, actuates the rock-shaft 2, and by the arm *d* raises the point 3; *e* is the circular plate in which the improvement consists, let in flush with the face of the feed-board.

Claim.—The circular slotted plate *e*, let in flush with the face of the feed-board, and fitted so that it can be rotated to bring its radial slot into any desired position to pass the registering point. Also, the spindle and arm connected to and combined with the circular slotted plate *e*, so as to slide vertically when actuated by competent mechani cal means, and project the point 3 through the slot in the plate.

No. 9,712.—JOHN P. SHERWOOD, of Fort Edward, N. Y.—*Improvement in Machines for making Wrought Nails.*—Patented May 10th, 1853.

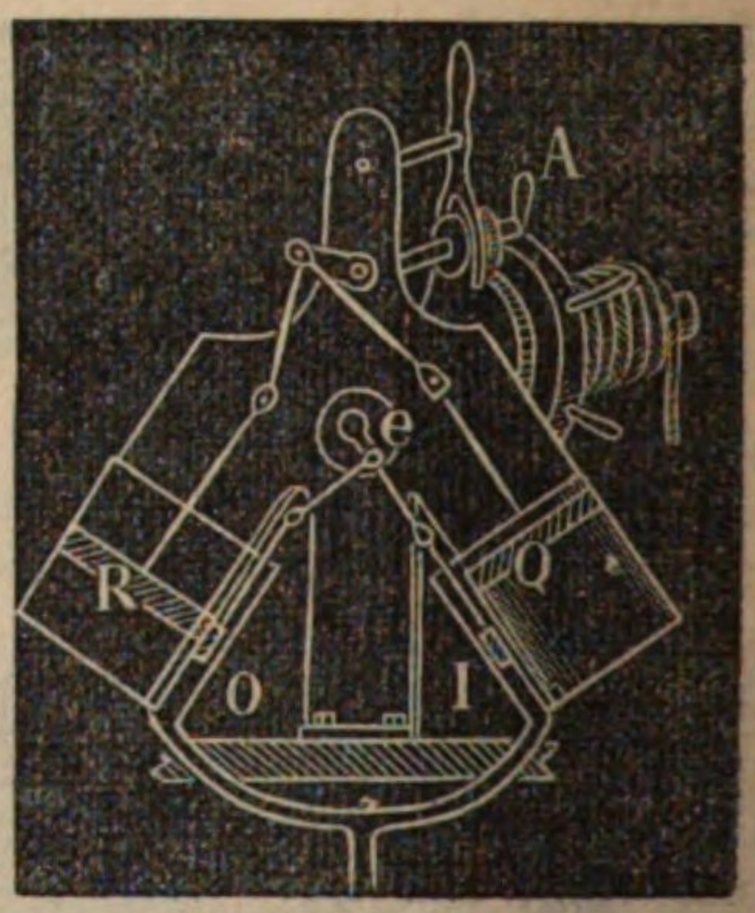
The principal features of this machine are a set of bevelling rollers,

two sets of cutting and pointing apparatus, with their appropriate heaters; and a reciprocating, griping and heading carriage, which, travelling to and fro between the two sets of pointing apparatus, alternately gripes and heads a pointed nail-blank at each of its extremities, and withdraws it from the pointing apparatus. By this machine wrought nails may be formed, either from nail plate presented sideways to the dies, or from nail rods presented endways thereto.

Claim.—The combination of a revolving cam-drum with converging die stocks, moving in directions oblique to the axis in which the cam-drum revolves, the cam-drums being constructed with two curved faces meeting at an angle; the whole arrangement being such that dies moving at right angles to each other are operated by a single drum, without the intervention of rods or levers.

Also, the compound gauge and nipper, which acts as a gauge to regulate the breadth of the nail blank, and also as a nipper to hold it firmly, during the action of the pointing die.

No. 9,713.—FREDERICK E. SICKELS, of New York City.—*Improvement in the Mode of Operating and Controlling the Rudders of Steam Vessels.*—Patented May 10th, 1853.



The nature of this invention consists in combining with the steersman's handle and the rudder a steam-engine, so arranged as to move or hold the rudder, with and against the force of the propelling engine. The steersman's handle at A (see fig.) is connected to the valve motion, so that in moving round the pin *e*, it moves the valve I and O, and alternately applies and releases the power from each of the pistons Q and R; thus causing the engines to move only with a motion corresponding to the motion of the steersman's handle, as each piston Q and R acts as a check to the other, until the power is applied and released by the steersman. In holding the rudder at midships, for instance, the engines will act in conjunction with each other.

Claim.—Combining the steersman's handle and the rudder with an engine so arranged as to move or hold the rudder with and against the force of the propelling engine.

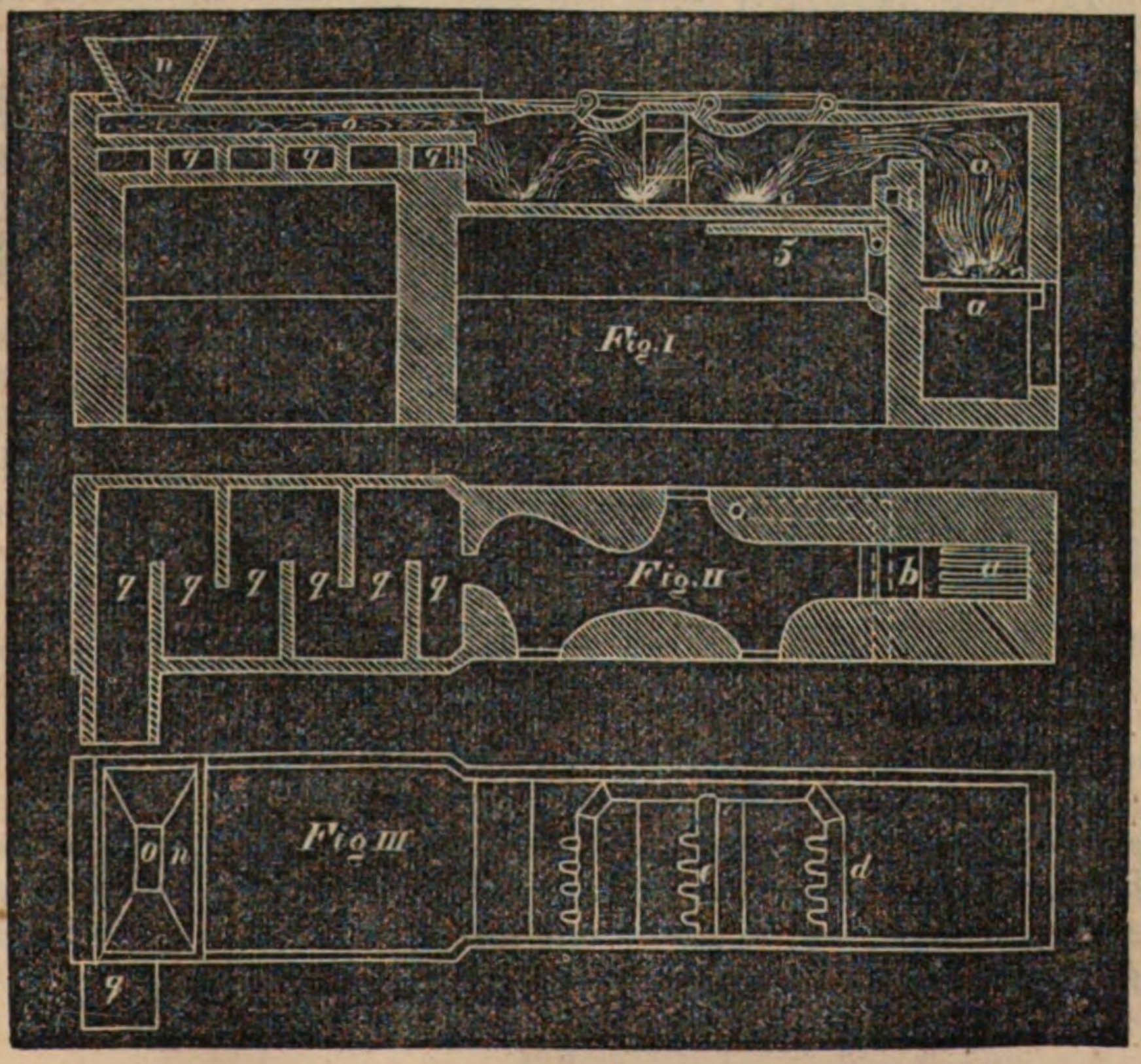
No. 9,714.—JOHN H. SNYDER, of Troy, N. Y.—*Improvement in Machines for Making Hook-headed Spikes.*—Patented May 10th, 1853.

The figure is an elevation of the dies, with the fixed heading lips. This machine is composed or consists of four rotating forming dies, and four working dies, making four pairs, two on the main shaft *b* and the other two on the other shaft *c*. Each pair consists of what the inventor calls a "former," on the wheel *q* of the shaft *b*, and a "worker" *p* on a wheel on the shaft *c*. The worker has a flange *s'*; *t*, the face of the worker *p*.

Claim.—Rolling wedge-pointed spikes between rotating dies, so formed that the face of one shall be the reverse of one face of the spike when formed, and the face of the other die to correspond, in the rotation, with the other face of the spike. Also, forming hook-heads on spikes by rolling from the point towards the head, to force the surplus metal towards the head; and then bending and giving the form required, by a lip on one of the dies projecting beyond its face, so that it shall have an increased motion, by reason of its greater radius, to give the required form. Also, in combination with the dies for rolling the shank of the spike, making the heading lip for forming the head movable, by forming the lip upon the end of a bar adapted to slide in the stock of the die. Also, in combination with the rotating dies, the employment of the sliding cutter and carrier, for cutting from a rod the required lengths, and carrying them to the rotating dies. Also, in combination with the rotating dies, the slides for presenting and forcing the ends of the rods into the rotating dies, to insure the proper position of the rod in the dies.

No. 9,715.—GEORGE A. WHIPPLE, of Newark, N. J.—*Improvement in Manufacturing Malleable Iron.*—Patented May 10th, 1853.

This invention consists in an improved method of decarbonizing



iron ore, in manufacturing malleable iron directly therefrom, in a reverberating furnace; first subjecting it to the process of deoxidation, by which the ore is brought directly to a pure iron, or comparatively so, rendering it malleable, and preventing either the red or cold share, so troublesome to iron masters. "To effect this I bring a blast of atmospheric air (says the inventor), heated or otherwise, upon the ore, according to the state the ore is in, and the heat required in each process as it progresses to the perfect loop, which drives out the carbon and unites therewith, and also during the process removes the other impurities, destroying or removing the causes that produce red or cold share in the iron." In the accompanying figures, *a* is a fire chamber; *a'*, a grate; *b*, a fire bridge built of fire brick; *d*, an air-pipe; *q q q*, flues; *n*, hopper on the table *o*.

Claim.—Forcing down upon the iron ore, from the roof of the furnace, in the different stages of the process as required, and on the different hearths, atmospheric air either heated or cold, for the purpose of decarbonizing the ore and bringing the iron to nature, or refining it, and regulating the degree of heat.

No. 9,716.—D. WINDER, of Xenia, Ohio.—*Improvement in Locomotive Steam Engines.*—Patented May 10th, 1853.

The object of this invention is to adapt the power of the engine to the varying resistance presented by the train, with the view to economize fuel, and at the same time equalize the power applied to the crank, or driving shaft.

To accomplish these ends, three steam cylinders are employed with their appendages; their pistons being connected with a three-throw crank, arranged at equal distances apart, so as to divide the circle into three equal parts, and have the power applied on the three, in regular succession; when this is combined with the employment of stop cocks, valves, or their equivalents, for the purpose of letting on or shutting off the steam from one end of each of the cylinders, so that the three can be employed as double or single acting engines, and thus increase or decrease the power, to suit the condition of the road.

Claim.—The employment of three engines connected with a three-throw crank on the driving shaft, with the cranks arranged at equal distances apart on the circle, when this is combined with the employment of valves, stop-cocks, or their equivalents, for letting the steam on both ends, or cutting it off from one end, to work the engines on the single or double acting principle.

No. 9,717.—CHARLES F. SIBBALD, of Philadelphia, Pa.—*Improvement in Paint Compound.*—Patented May 10th, 1853.

The object or use of this compound is to prevent the formation of hard crust upon the inner surface of steam boilers, and arrest the corrosion of them. The parts are one pound of tallow, one pound of graphite or black lead (plumbago), one-eighth of a pound of pulverized charcoal, to which may be added one gill of gas-tar, to make the mixture spread more easily upon the surface of boilers, &c.

Claim.—The above compound, for the purpose set forth.

No. 9,718.—John Mee, of Lowell, Mass.—*Improvement in Knitting Looms.*—Patented May 10th, 1853.

The object of this invention is the weaving a new and improved manufacture of warp-knit cloth, produced by two sets of warp threads, and two sets of needles; and wherein the rib is shown on both sides of the cloth of equal width, or on one side of double the width of the other.

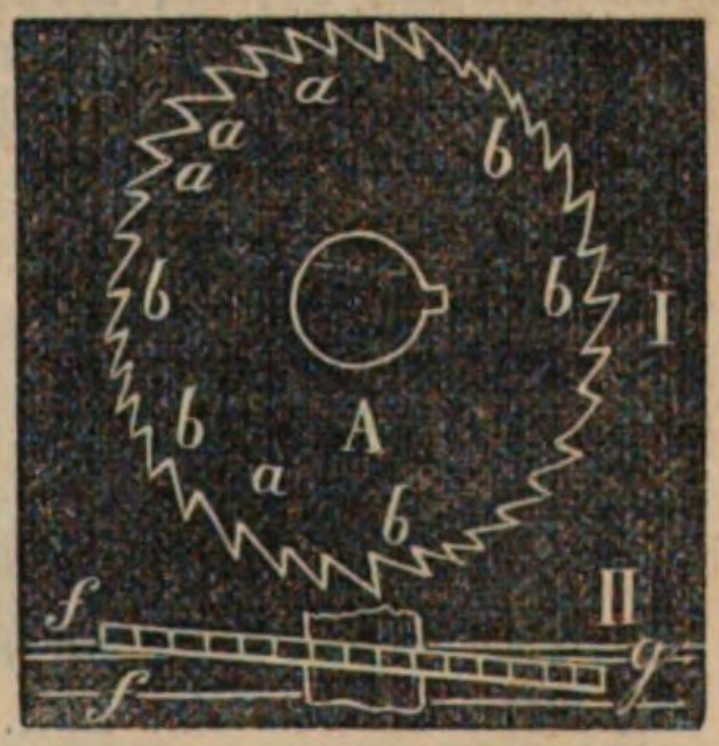
Claim.—The two sets of thread guides, in combination with two sets of needles, and machinery for casting the loops, the whole being made to operate together, to produce a ribbed knit fabric. Also, causing the two sets of needles to work or move up or down independently of each other, and thus be out of the way of the thread-guides, and be arranged close together, to make closer work than can be produced when the two sets of needles are made to move in one direction (either up or down) at the same time.

No. 9,719.—John Mee, of Lowell, Mass.—*Improvement in Warp Net Fabrics.*—Patented May 10th, 1853.

This improved fabric is made by means of two sets of warp threads, and two sets of needles or hooks; exhibiting a perfect rib on both sides of it, and which rib shall be of equal width on both sides, or double width on one side to that on the other.

Claim.—The claim embraces the above described fabric.

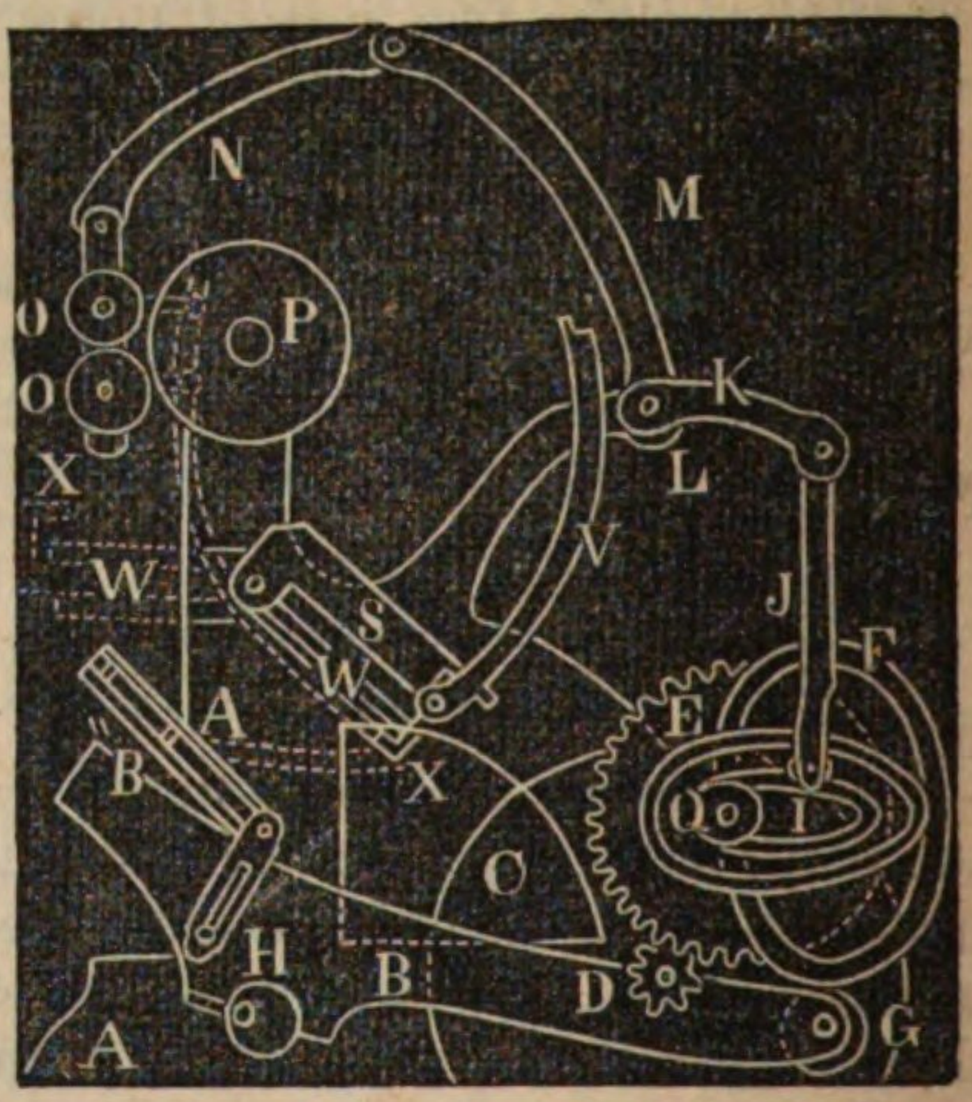
No. 9,720.—James M. Patton & William F. Fergus, of Philadelphia, Pa.—*Improvement in Tongueing and Grooving, and Moulding Cutters.*—Patented May 10th, 1853.



The nature of this invention consists in arranging series of cutting teeth, for forming a tongue, groove, or moulding, on the periphery of a generally elliptical plate inclined to the axis of its rotation, so that, as the plate is rotated, the cutting teeth upon its periphery shall correspond in reverse to the tongue, groove, or moulding, to be formed thereby. The double series of cutting teeth *b b*, on opposite edges of the plate A, are on the peripheries of segments of the same ellipse, and the plate is sufficiently inclined to cause all the teeth to be exactly equi-distant from the axis of rotation, thereby causing them to dress the faces of the lips *f f*, at the sides and groove *g*. The double series of cutting teeth *a a*, placed between the double series of teeth *b b*, are also on the peripheries of segments of an ellipse of a larger size, but parallel or nearly so with the ellipse before mentioned. This causes all the cutters *a a* in both series to project the same distance from the axis of rotation, and to cut at a greater distance from the axis than the double series of teeth *b b*, and thereby to form the groove *g* whilst the teeth *b b* are dressing the lips *f f* at the sides of the same.

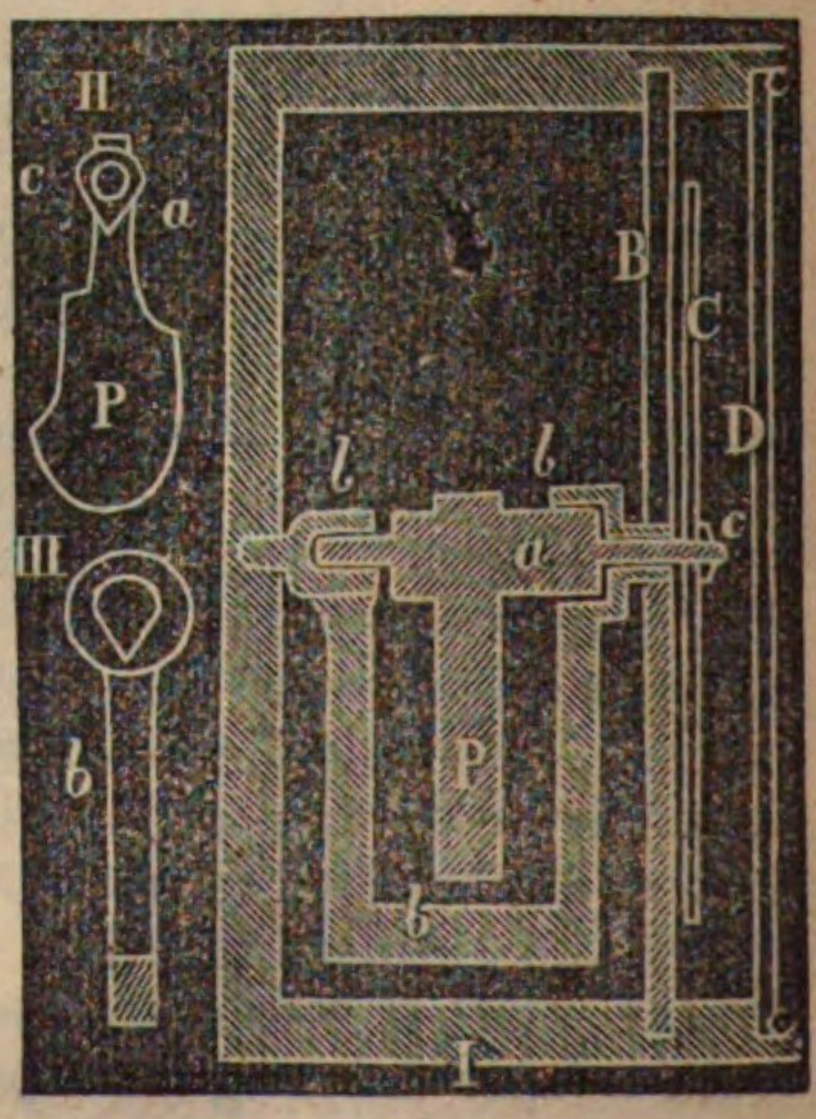
Claim.—Arranging the cutting teeth on the periphery of a plate inclined to the axis of its rotation, so that, as they are rotated, they shall correspond in reverse to the tongue and groove or moulding to be formed thereby.

No. 9,721.—JAMES YOUNG, of Philadelphia, Pa.—*Improvement in Printing Presses.*—Patented May 10th, 1853.



In the figure, A represents the frame; Q, cam shaft; D, driving pinion; C, pulley on the pinion shaft; E, spur wheel; B, lever; G, roller; F, cam; B″, platen; H, fulcrum; S, stationary bed; W, false bed; V, segment bar; X, movable hook connected with the sliding pieces; P, distributing roller; O O, inking rollers; N, connecting rod; M, curved arm projecting from arm I′ on cam shaft Q, connected by link J, which embraces cam I; A′, nipper frame.

To operate this press, the bed is first brought into the position shown by the dotted lines, and a form laid on to it; the segment V is then unfastened, and the bed falls back into place, the clamp at X at the same time griping and holding it fast; the nippers are then properly set, and a sheet of paper or card laid on the platen, when the press is put into operation; the rollers O O descend and ink the types; after they return to their position on the roller, the platen ascends and makes the impression, the nipper being first brought into contact with the paper in the ascent of the platen, and held by springs until the paper is withdrawn from the form after the impression is made, when the nipper is made to let go, at any point to which it is adjusted, and the sheet is thrown off.



Claim.—The combination and arrangement for operating the inking rollers. Also, a false bed hinged to a stationary one, and the mode of fastening the form to the bed. Also, the eccentric in combination with the platen, by means of which the latter can be adjusted while in motion, or thrown off.

No. 9,722.—THOMAS A. CHANDLER, of Rockford, Ill.—*Improvement in Pendulum Level.*—Patented May 17th, 1853.

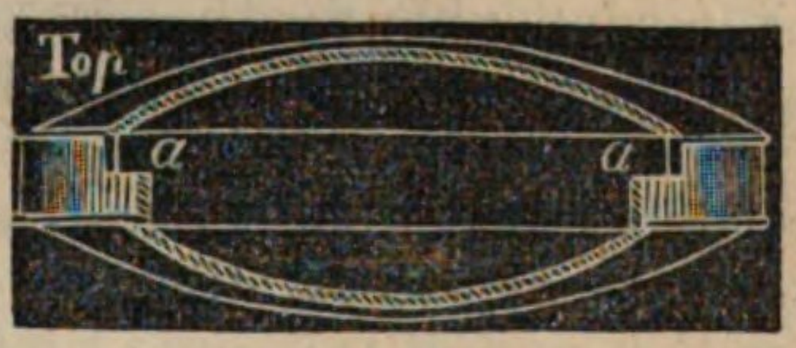
This invention consists in supporting the knife edges or bearings of the axle

of pendulums of indicators in concave, angular, or knife-edge bearings formed in the turning axle of a second pendulum, whereby changes in the position of the support of the pendulum are more accurately measured by the indicator. Figure I. represents at B the disk for the graduated circle; C, indicator; D, a plate of glass; *b*, axle bent into a form resembling a bell-yoke, corresponding to the arch of the yoke, being made heavy, so as to perform the function of a pendulum ball, as well as that of an axle; P, pendulum, which has knife-edge bearings, as shown at II., that rest in cavities of a corresponding angular shape, as shown at III.

Claim.—The method of supporting the angular journals of the axle of a pendulum indicator, in turning and self-adjusting bearings of similar form to the angular journals.

No. 9,723.—Moses Coburn, of Savannah, Ga.—*Improvement in Violins.*—Patented May 17th, 1853.

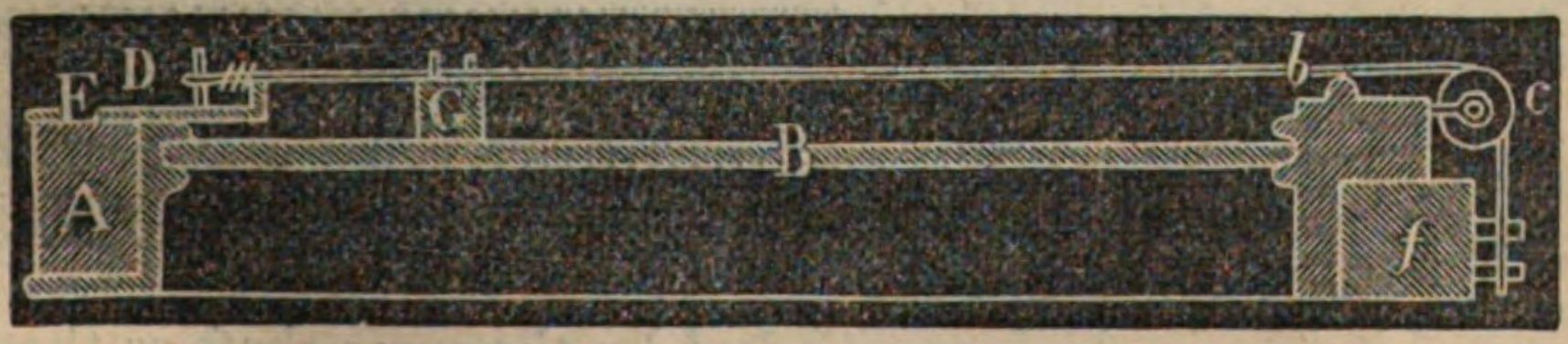
This improvement consists in making the apertures, or means of communication between the exterior and interior, in the sides, instead of at the top, as shown in the figure at *a a*; this is to prevent the weakening of the centre of the top, and the consequent impediment to its perfect vibration.



Claim.—The apertures *a a*, in the sides, instead of in the top, for the purposes described, as set forth.

No. 9,724.—Edwin Fobes, of Boston, Mass.—*Improvement in Vertical Pianos.*—Patented May 17th, 1853.

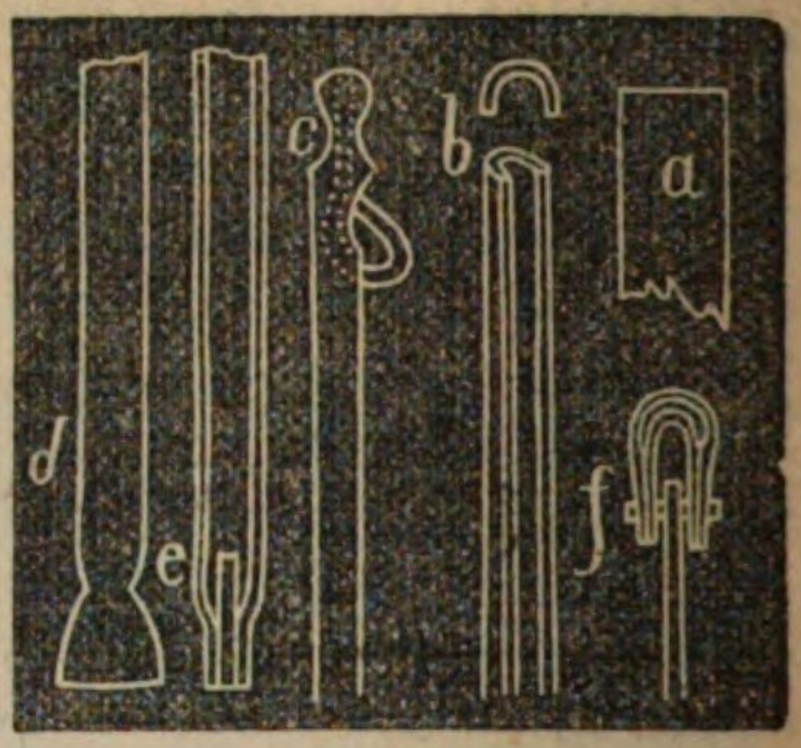
This improvement is "practically and usefully" applied to the piccolo upright piano. A represents the metallic frame; B, sounding



board, D hitch-pins at the bar E, G bridge, *b* string, *c* roller with two grooves on its periphery, for the strings to pass over it; *f*, wooden bar for the tuning-pins.

Claim.—The arrangement of the straining pins, with their axes vertical or nearly so, and parallel or nearly so, to the general plane of the strings, and to stand above the iron frame as set forth; the strings of each hitch-pin having guide rollers applied to it—all for the purpose of advantages in tuning the instrument. Also, extending the sounding-board upwards above the bridge, and in rear of the bridge plate in the treble, and so as to be capable of vibrating, in rear of and above said bridge plate.

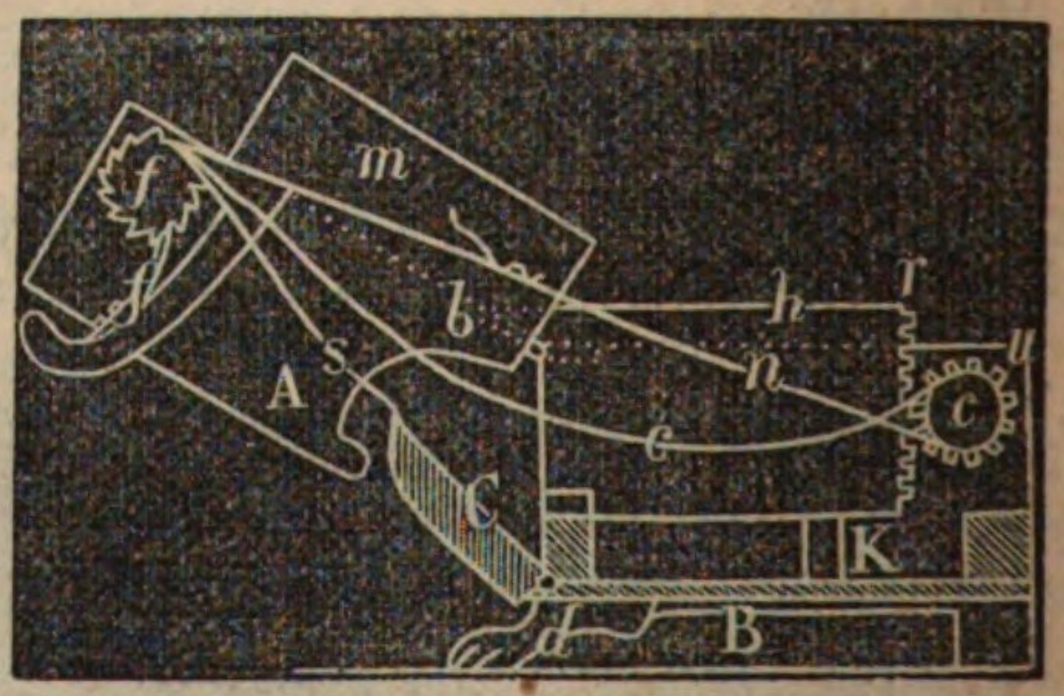
No. 9,725.—Samuel Fox, of Sheffield, England.—*Improvements in Umbrellas and Parasols.*—Patented May 17th, 1853.



The inventor employs steel wire (say No. 13); when annealed, it is passed between a pair of plain rollers and flattened into fillets or strips about the width of fig. at *a*. These strips are annealed again before they are passed through rolls to give them the trough-like form *b*; when they have that form, they are again annealed and straightened, and cut off into proper sizes for ribs and stretchers. A wire eye is introduced and fastened into the end of the rib by pressing it together, as seen at *c*; the other end of the rib is flattened, after a small piece of metal has been introduced (see *e* and *d*): a strip of metal is also put round the rib and forced into the trough, to make the connexion for the stretcher as shown at *f*.

Claim.—Making umbrellas, &c., with ribs and stretchers of plate steel bent in the trough-like shape, in combination with eyes and connexions, whereby they are rendered much lighter, and still possess all the requisite strength of those made with solid or round rods of metal, and at the same time the formation of the eyes and connexions is facilitated.

No. 9,726.—Lewis L. Gilliland and Joseph R. Wagoner, of Dayton, Ohio.—*Improvement in Sofa Beds.*—Patented May 17th, 1853.



The annexed figure is a vertical cross section of this sofa bedstead, showing the upper half of the sofa partly turned over in the act of forming the bedstead. A is the back of the sofa, B the lower frame, G front board, *e* and *f* two shafts, to which the canvas sacking *c* is secured. At each end of the shaft near the pinions are attached the straps *n*, which are worked by the same shaft as the sacking *c*. The turning of the roller *e* elevates the head and foot-boards *h*, which are fitted with racks *r*, into which pinions on the shaft *e* are fixed.

Claim.—The hinged front board, so arranged that by turning over the seat, to convert the apparatus from a sofa into a bed, the front-board c shall turn down to prevent it from forming a hard ridge under the sacking, which would be uncomfortable to lie on; and when the seat is turned back again to reconvert the bed into a sofa, the front-board shall be lifted up again, by the act of turning the seat back into the proper position to support the sacking of the seat. Also, the arrangement of the head and foot board, to be operated as described.

Also, the arrangement of the turning seat of the sofa and the sackings of the bed and seat in such a manner, that by the turning of the seat to form the bed the sacking of the bed shall be stretched, and by turning back to form the sofa the sacking of the sofa shall be stretched.

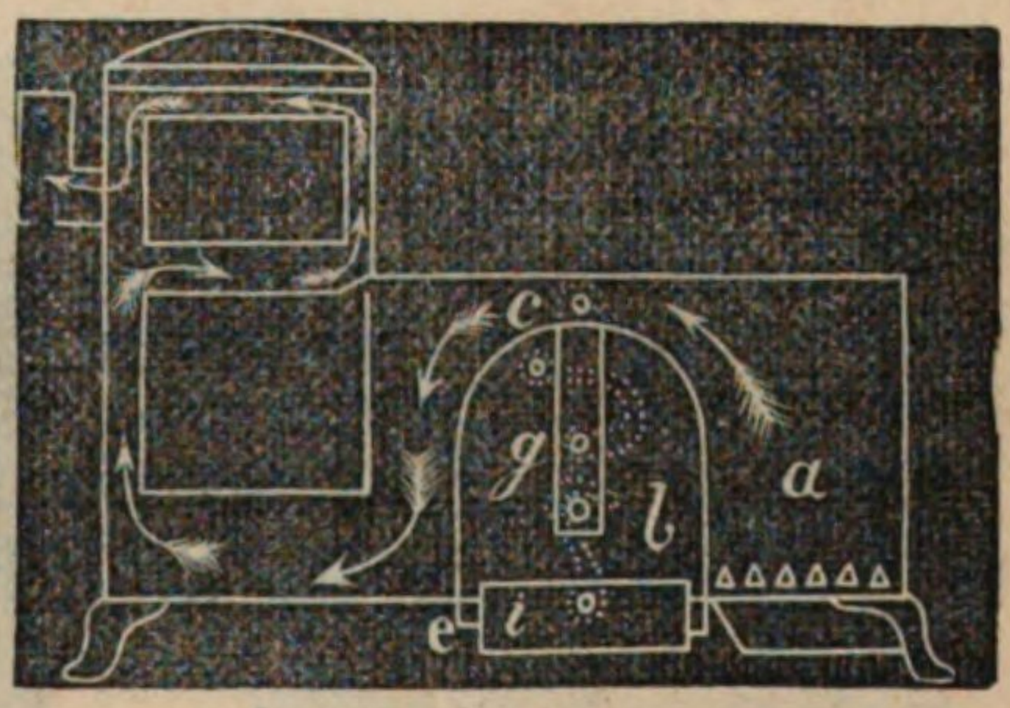
No. 9,727.—John H. H. Hawes, of Ithaca, N. Y.—*Improvement in Calendar Clocks.*—Patented May 17th, 1853.

The nature of this invention consists, first, in causing a clock calendar to supply its own changes for the irregularities in the length of the months, and showing the exact, and no fractional part of a day, week, or month; and, secondly, in combining, with the day of the week indicator, the two wheels working together spring tight, so as to move together, and independently of each other, for the purpose of allowing the day of the month indicator to run during the time the change is taking place from the end of a short month to the beginning of the next month, while the day of the week indicator passes from one day to another in regular succession.

Claim.—The combination of mechanism for the purpose set forth, substantially as described.

No. 9,728.—Matthäus Heim, of Cincinnati, Ohio.—*Improvement in Cooking Stoves.*—Patented May 17th, 1853.

The figure represents a section of this improved stove: *b* is an arched chamber for roasting; at each side of the stove depend hangers *c*, having each a button, over which the doors *e* are slipped, and secured thereto by a staple. A hole through both hangers and doors gives journal bearings to a spit *g*; from the hangers depends a pan *i*, to catch the dripping; *a* is the fireplace.



Claim.—The open bottomed space or chamber *b*, behind the fire, encircled at sides and top by flue, and closed at the ends by movable doors, constituting an accessible and well ventilated arrangement for roasting purposes.

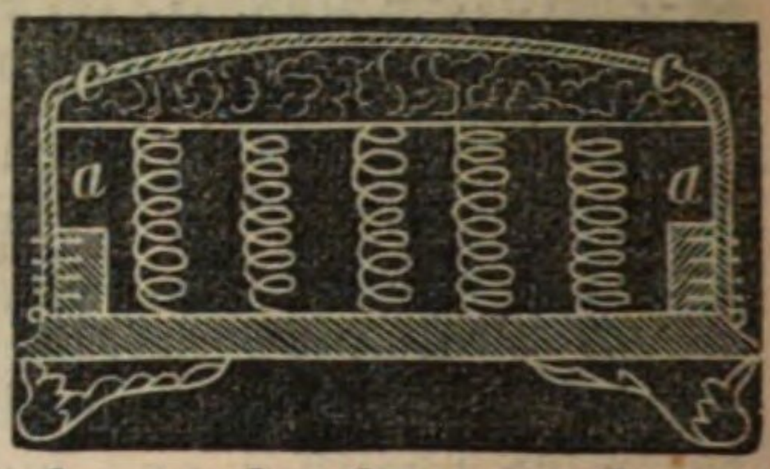
No. 9,729.—Abner H. Longley, of Lebanon, Ind.—*Improvement in Machine for Boring, and Cutting Screws for Bedsteads and other articles.*—Patented May 17th, 1853.

This machine consists of an auger, arranged to operate inside of the screw-cutting apparatus, so as to bore the hole or make the tenon and cut the screw in it, or upon it, at one and the same operation, and thereby "save twenty-five per cent. of the labor required to do the same work by the machines heretofore used for that purpose."

Claim.—Giving an equal progressive motion to the cutting tools,

in combination with a differential rotary motion, for the purpose of cutting the screws at the same time the hole is bored, or the tenon is made, in the manner and for the purpose set forth.

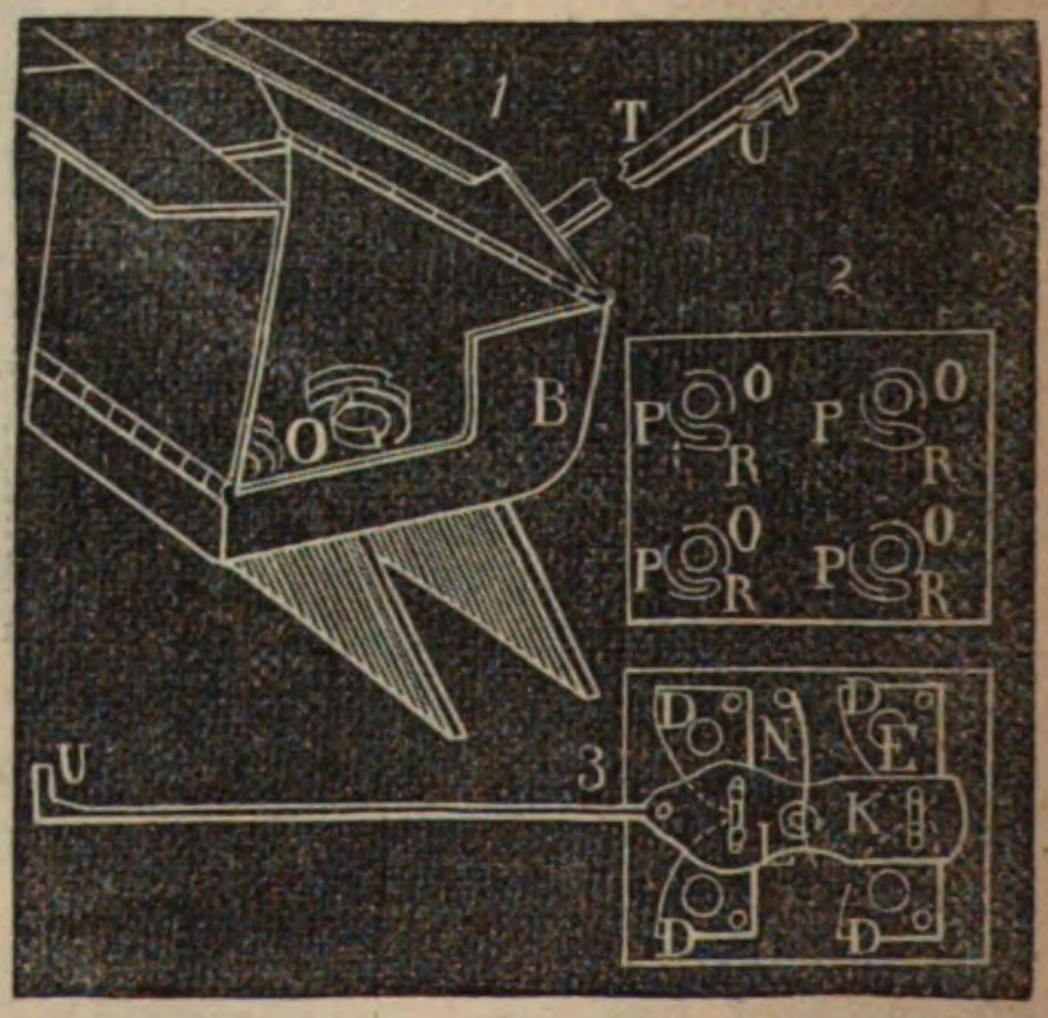
No. 9,730.—FREDERICK MATHESIUS, of New York City.—*Improvement in Upholstering Furniture.*—Patented May 17th, 1853.



The nature of this invention consists in attaching to the edges of the hair cloth or other material, to be used for the outside covering of chairs or sofa seats or any other article to be covered, ligaments or springs made of India-rubber or other elastic material. This elastic ligament *a a* is fastened to the sides of the covering *c c*, and also to the framework; so that when a person sits upon the chair or sofa, the elastic string will stretch to the extent of the pressure without straining the outer or fancy covering, which will resume its smooth surface, upon the rising of the person.

Claim.—The above description substantially embraces the claim of the inventor.

No. 9,731.—JULIUS A. PEASE, of New York City.—*Improvement in Seeding-Hoes.*—Patented May 17th, 1853.

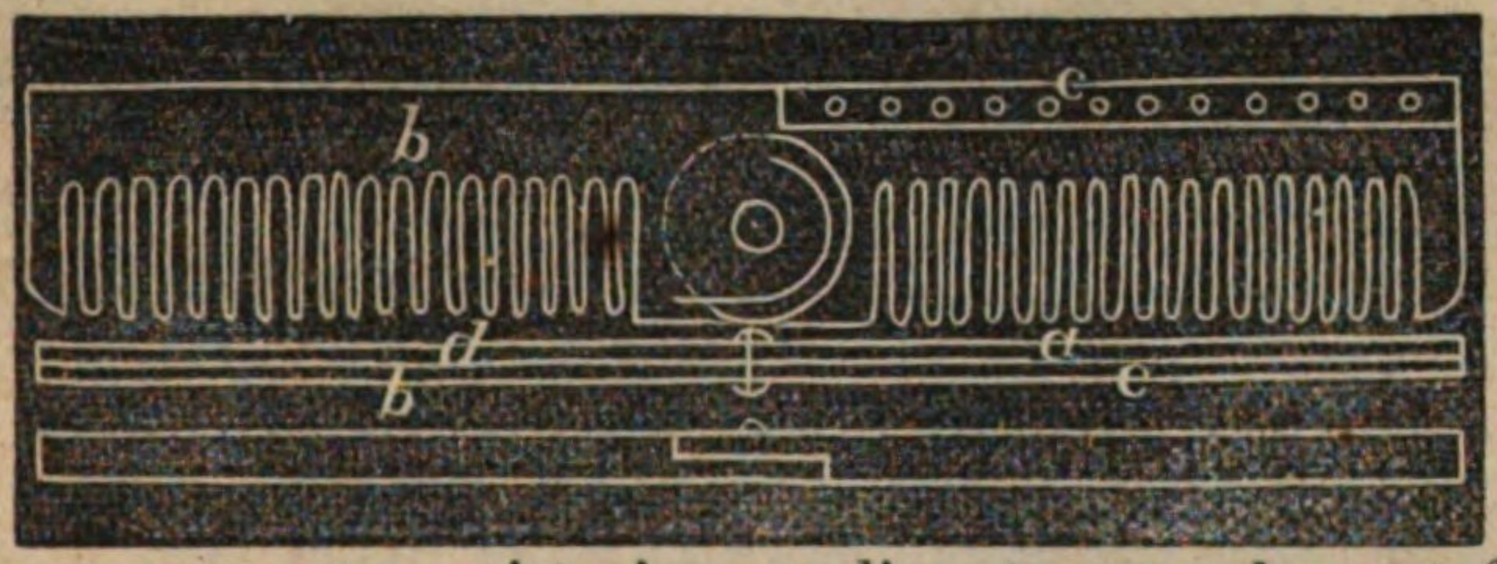


This invention consists of a double-bladed hoe, with a seed-box and drop attached to it at the bottom, so constructed and arranged as to drop four kernels of corn at equal distances apart, into the opening in the ground behind each blade, made by the stroke of the hoe. The seeds are covered by the back stroke of the hoe as it is lifted from the ground. The corn is dropped by pulling the slide near the end of the handle with the fore fingers of the right hand, which brings the holes in the quarter-circle plates under the holes in the bottom of the box, allowing the kernels within the guards to pass through, and at the same time shutting off the grain from entering within said guards. O O O O are guards reaching two thirds the way round each hole; P P P P are springs which play in front of the guards; the springs are attached to quarter-circle plates D D D D (in fig. 3), which work on the under side of the box B; the springs work through slots in the bottom of the box and within guards R; near the centre of movable plate K is a pin L, against which bears a spring N, which keeps the holes shut in the bottom of the box; the movable plate K is attached to slide U (fig. 1),

near the end of the handle T. Fig. 1 shows the box with the lid open.

Claim.—The combination and arrangement of a double-bladed hoe with seed-box and drop, for the purpose of planting separate kerneis of corn at equal distances apart.

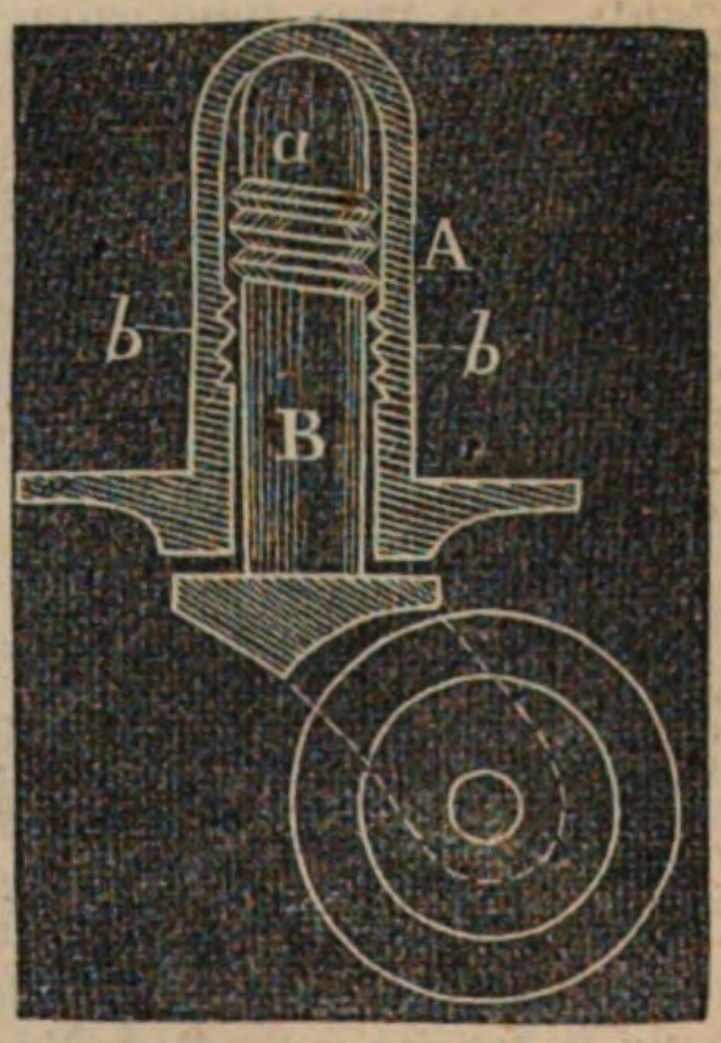
No. 9,732.—WILLIAM J. THORN, of Westbrook, Maine.—*Improvement in Pocket Combs.*—Patented May 17th, 1853.



This improvement consists in coupling two combs, cut from one piece of ivory, horn, or wood, together by a round joint. The object is to save stock or material, and also produce a handsomer and better article.

Claim.—The manufacture of pocket combs with semicircular joints, in combination with strips overlapping them.

No. 9,733.—WILLIAM W. WADE, of Springfield, Mass.—*Improvement in Castors for Furniture.*—Patented May 17th, 1853.

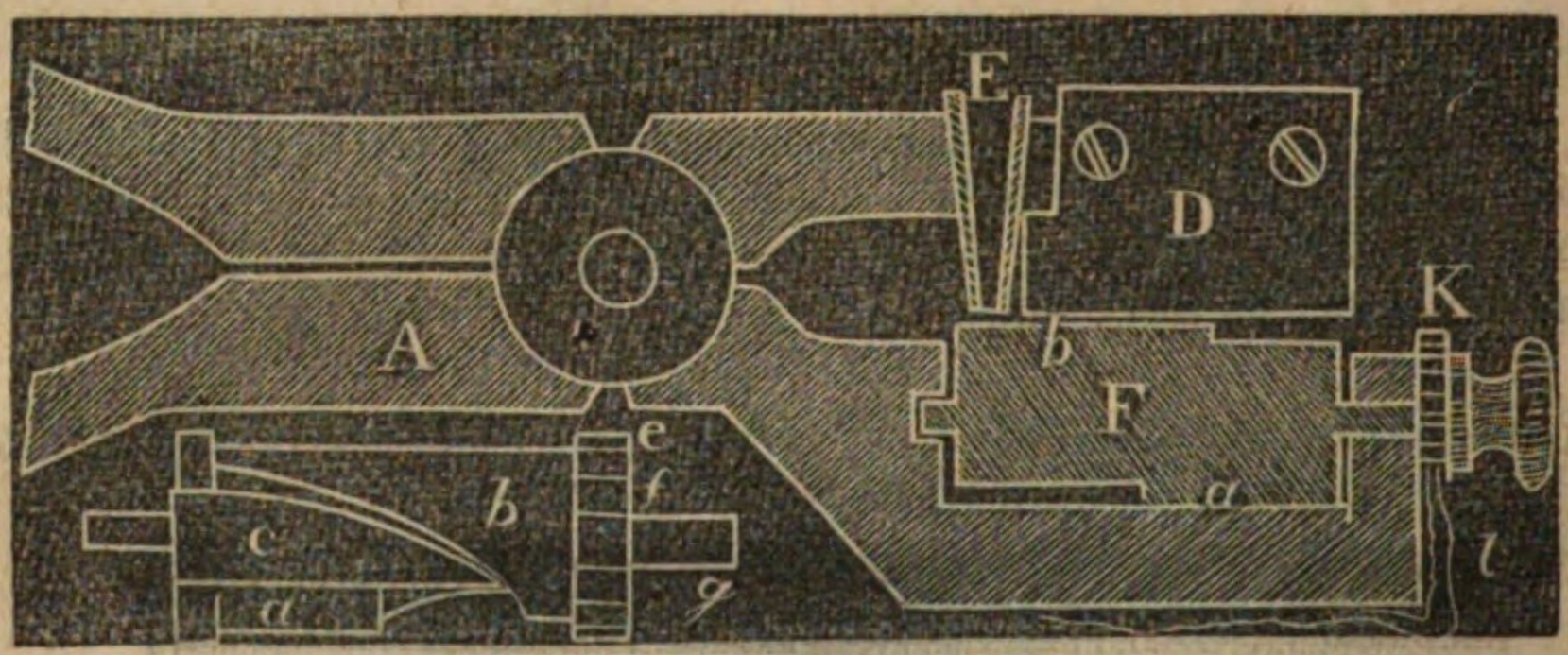


This improvement is confined to shank B, and socket A: on shank B there is a male screw *a*, to fit the screw *b* in the socket. When the male screw of shank B passes the female screw in the socket A, it not only allows the shank to turn freely, but the latter will also be held in place by the two screws and be prevented from falling out of the socket.

Claim.—The arrangement of the male screw *a* on the spindle B, in combination with or respect to the arrangement of the female screw *b* in the socket, and to the bearing surfaces of the parts A and B; whereby the spindle is not only preserved in the socket piece by the two screws, but allowed freely to rotate when its bearing surface is in contact with the bearing surface of the socket.

No. 9,734.—HALSEY D. WALCOTT, of Boston, Mass.—*Improvement in graduated Cutters, for Cloth and other Substances.*—Patented May 17th, 1853.

The figure shows a section of the cutter. E is a small tubular punch fixed to the lever A, and against the rear of the cutting knife D, and



in conjunction with the knife cuts a button-hole formed of a straight slit and a circular hole at one end of it. F is the adjustable and movable bed against which the knife acts, and on which the cloth rests. The bed is a separate figure represented as formed of two triangular or trapezoidal pieces of metal *a b*, wrapped around a cylinder *c*; one of them at one end has a series of plane beds or surfaces *e f g*, &c., which rotate underneath the tubular punch E; a small notched wheel K and a spring *l* retain the bed in any position in which it may be set. The length of the button-hole may be changed at pleasure, by rotating the bed on its axis.

Claim.—In its connexion with the cutting knife, making the bed to move or rotate transversely, in combination with making the surface of it which acts in conjunction with the knife of variable lengths, that different lengths of cut may be made. Also, combining with the knife and tubular cutter, and a rotary shaft or cylinder placed under them, the two triangular or trapezoidal beds *a b*, arranged on the shaft, whereby a button-hole may be made of any desirable length, either with or without a hole at one end.

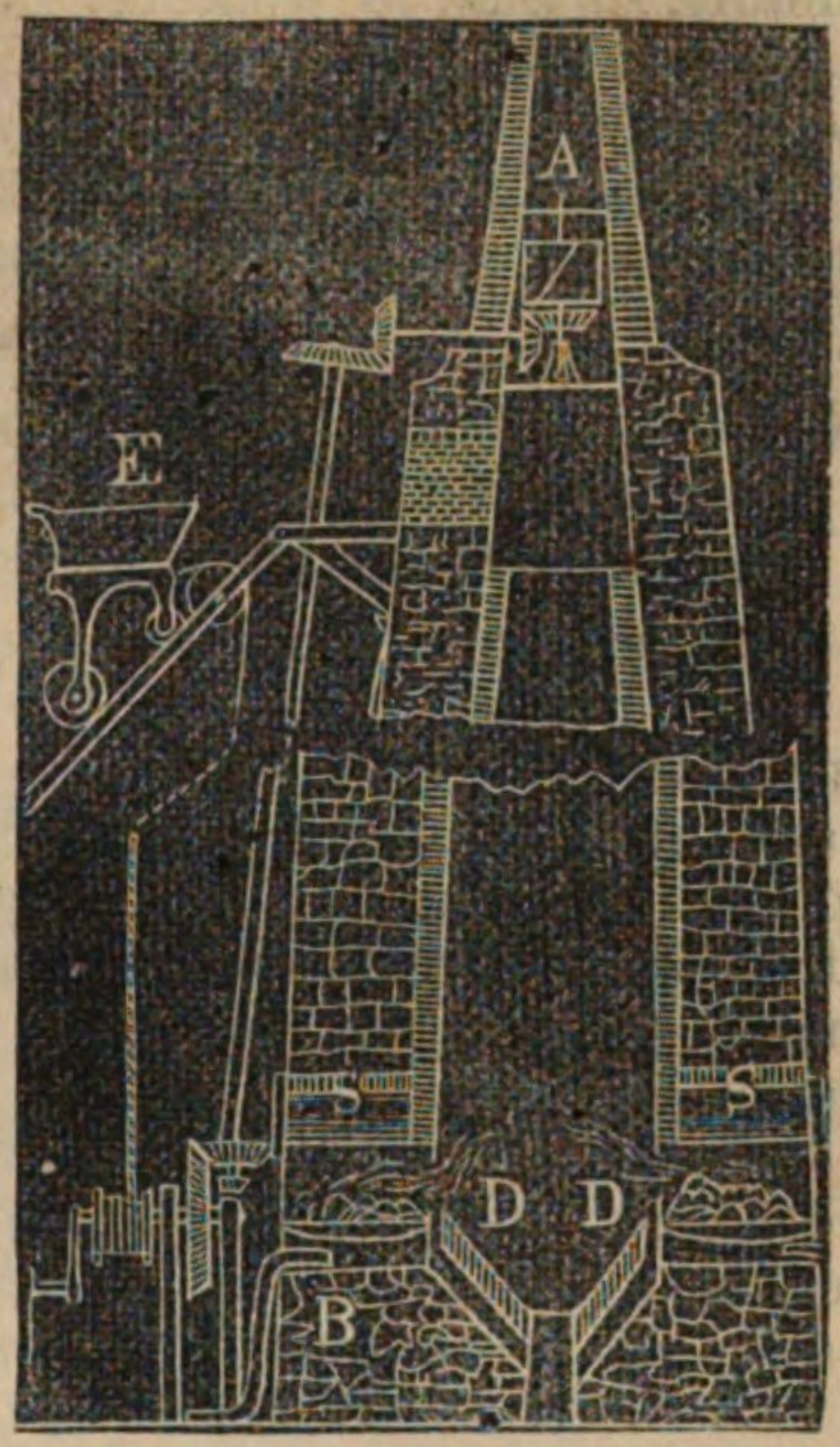
No. 9,735.—David L. Weatherhead, of Philadelphia, Pa.—*Improvement in Cleansing and Cooling Block Dies in Rivet Machines.*—Patented May 17th, 1853.

This improvement relates to the cooling of closed or block dies in which rivets are headed and shaped, and consists in expelling therefrom the particles of oxide, cinders, &c., that fall from the article being formed, by means of a current of water, steam, air, or other fluid. While the operations of heading, &c., are going on, water is passed into the die, and runs out at the mouth of the same, during the interval between the discharge of one block and the admission of another.

Claim.—Clearing cinders, scales, and other obstructions from a socket die, made in a solid block, for the purpose of heading rivets, by forcing in at the closed end of the die a stream of water that washes out the cinders, &c., every time a rivet is discharged; the inner end of the socket of the die being closed, so that the pressure of the head of water is rendered available for forcing obstructions out of the die.

No. 9,736.—Samuel J. Seely, of New York, N. Y.—*Improvement in Lime Kilns.*—Patented May 17th, 1853.

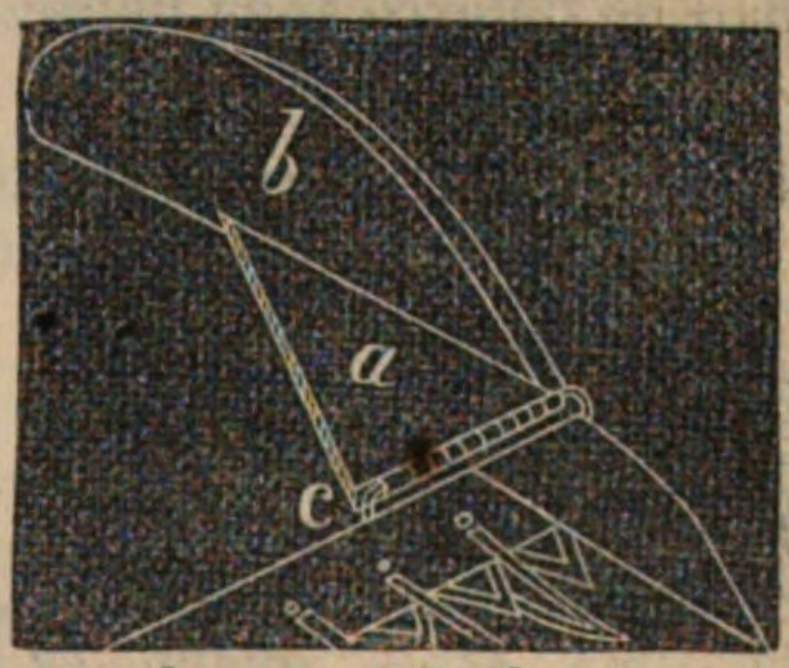
This improvement consists in a method of calcining limestone by the aid of an artificial draught of air maintained in the kiln by means of mechanical blowers. A suction blower is arranged at the top and a forcing blower at the bottom of the kiln. A is the blower at the top; B at the bottom. The kiln furnace is also constructed for a boiler furnace, the boilers *s s* being placed over the fire. D D, furnace. The car E for supplying the kiln is worked by the same steam engine which operates the blowers.



Claim.—The claim includes substantially the above description. Also, the method of regulating the production of steam, to generate the power for the engine in proportion to the duty required of it, by setting the steam boiler in the same furnace that supplies the heat for calcining the limestone.

No. 9,737.—William F. Ketchum, of Buffalo, N. Y.—*Improvement in Mowing Machines.*—Patented May 17th, 1853.

The object of this improvement is to clear the track for the heel of the rack-piece, when the machine is on the return swath, by removing the cut grass from the standing stubble, turning it in out of the way, and thus prevent it from clogging or choking the cutters. *a*, rack-piece; *b*, raking-board; *c*, the hinge.



Claim.—The scraper or raking-board, combined with the rack-piece, at an angle less than a right angle, for the purposes above set forth.

No. 9,738.—Richard Montgomery, of New York City.—*Improvement in Corrugated Plates for Steam Boilers.*—Patented May 17th, 1853.

This invention consists in making a plate of metal, with a margin

on its edges wide enough for the rivet holes, thick, and flat (see fig. at *c*); and its middle, or that portion included within the margin,

thinner, but corrugated to render it stiff, the depths of the folds of the corrugation being inversely proportioned to the thickness of the middle, so that, to whatever degree it may be reduced, it will still have the requisite degree of lateral strength imparted to it by the corrugation.

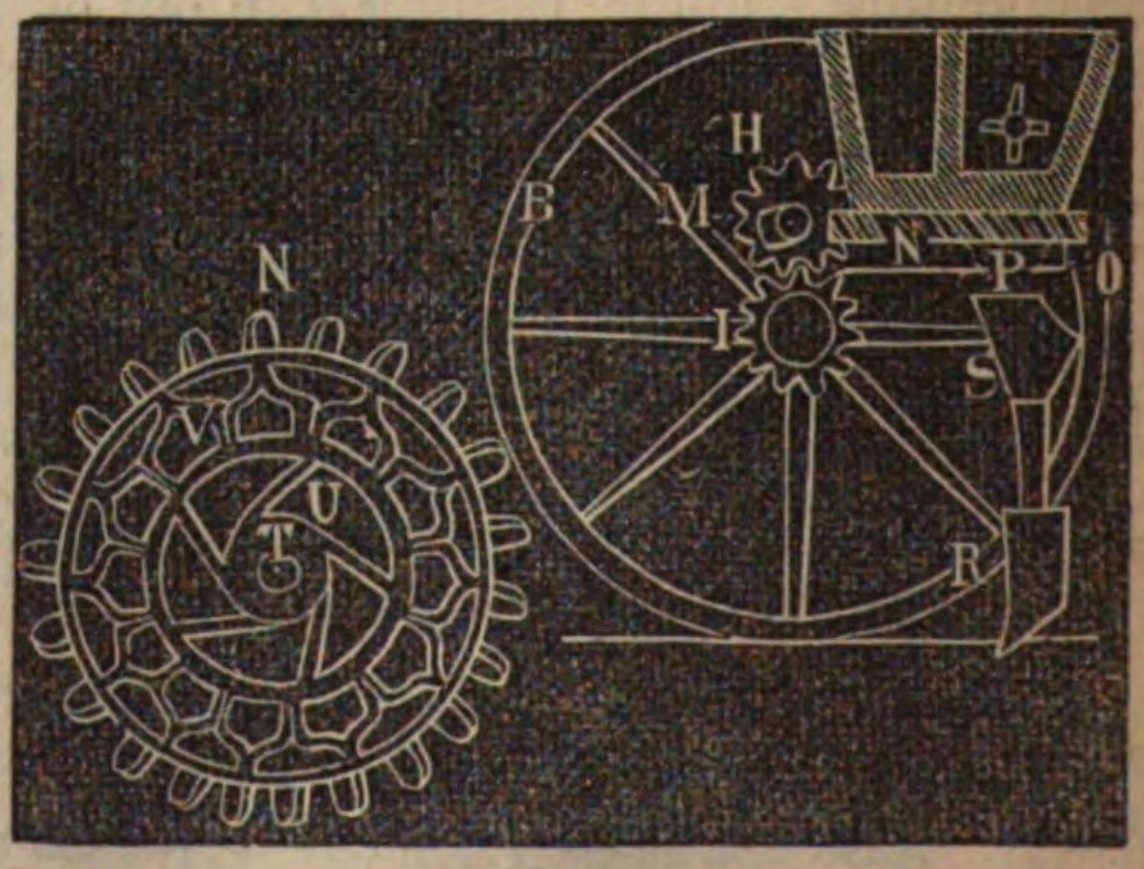
Claim.—The corrugated metal plate as herein described, with flat margins of greater thickness than its middle.

No. 9,739.—James A. Woodbury, of Winchester, Mass., Joshua Merrill, of Boston, Mass., and George Patten, of Charlestown, Mass.—*Improvement in Air-Engines.*—Patented May 17th, 1853.

This invention consists in the application of caloric to air while in a highly compressed state, by which its expansive force will be greatly increased by the same amount of heat (four hundred and eighty degrees) as is required to double the volume of the ordinary atmosphere. The most essential parts of this engine consist of a cylinder of the same construction as an ordinary steam engine, an air-pump, and a receiver for containing the compressed air, and to which the heat is applied.

Claim.—The mode of using air as a motive power, substantially as described. Also, in combination with such an engine, a device for regulating the pressure of the air in the receiver, and economizing the power of the engine; the device consisting of a weighted bar, entering the receiver through a stuffing box, and connected at its opposite end with the stop-cocks attached to the chambers of the air-pumps; intending to use any known means, for accomplishing the two-fold purpose of regulating the pressure of the air in the receiver, and opening the pump chambers to the atmosphere, so that the pump shall be relieved from unnecessary labor.

No. 9,740.—William Cressler, of Shippensburg, Pa.—*Improvement in Seed Planters.*—Patented May 17th, 1853.



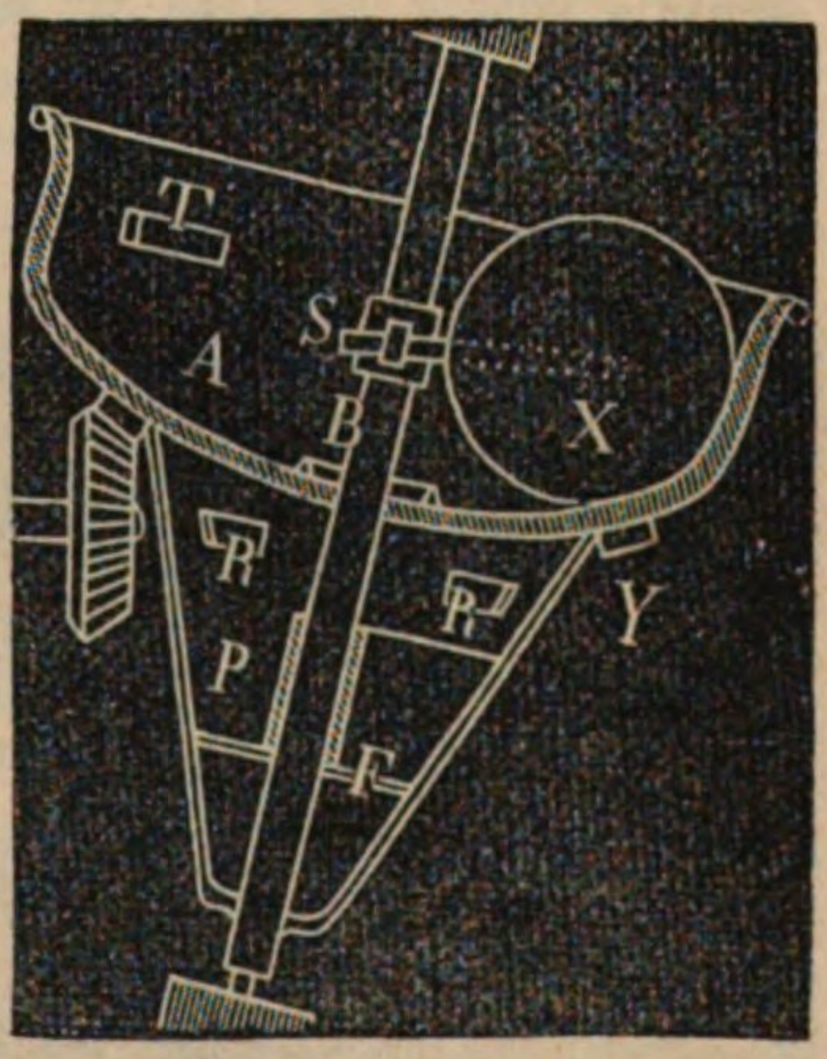
The nature of this invention consists in the manner of constructing the seeding-wheel, with a circular flange for dividing the grain from the lime, ashes, guano, or other material which may be sown with it, and the partitions in said seeding-wheel for regulating the quantity and distributing the same regularly to the opening through which it passes out of the machine. The figure illustrates the invention. On the hub of one of the wheels B is a spur-wheel I which gears into another H, attached to a shaft; on this shaft are two short screws M, which work into and rotate the seeding-

wheel N, shown separately on a larger scale. The seeding-wheel works under the hopper; through the cross-piece o is an opening P, to allow the grain and other materials sown to escape into the tube S, and shoe R.

From the hub T of the seeding-wheel N extend oblique spokes U, which form chambers for receiving lime or guano, &c., and carry it around to the opening P, and allow it to escape into the tubes S and shoe R. The space between the flange and the periphery of the seeding-wheel N is divided into smaller apartments for the grain, by means of the curved partitions V, each apartment receiving a certain quantity of grain, and moving it around to the opening P, from whence it is conveyed by the tubes to the ground. The hopper is divided into two compartments, the one for grain, the other for lime, guano, &c.

Claim.—In combination with the adjustable tubes, the seeding-wheel N with its flange and partition, for adjusting, receiving, and conveying the grain and other material to be sown with it, around to the opening whence it is conveyed to the ground.

No. 9,741.—HIRAM BERDAN, of New York City.—*Improvement in Machine for Pulverizing Auriferous Quartz and Amalgamating the Gold.*—Patented May 24th, 1853.



The nature of this invention consists in attaching, by a pin or axle and a box and sleeve (as seen in the figure at s), a ball or sphere X, of three thousand or more pounds weight, to the inclined shaft B of an inclined vase or bowl A, whose axis inclines a few degrees from a perpendicular; which ball or sphere is so fastened to the axis of the bowl as to have a combined rotary and spiral motion by the turning of said bowl upon its inclined axis, which may be effected by horse or any convenient power applied to gearing which mashes into cogs on the periphery of the bowl at Y. The basin A is furnished with quicksilver, serving also as an amalgamator; the finely pulverized gold is retained, while the earthy matters pass off with the stream of water flowing into and out of the bowl through openings T at its sides. The ball may be made solid, or hollow to be filled with lead or sand when at the proper locality to be used; the basin, which acts as an endless inclined plane, being turned upon its axis with a comparatively small amount of power, the ball in the mean time revolving continually, and by its own gravity keeping in the lower portion of the bowl, and thus grinding the quartz successively presented to it by the continued rotation of the basin. Also, in connecting with the bowl or basin a fire chamber, divided into four divisions P, with grate F, which chamber revolves with the bowl or basin.

Claim.—Attaching the ball or sphere obliquely to the inclined shaft (and in the inclined bowl) by the pin-box and sleeve, in combination with the inclined shaft, and inclined bowl. Also, in connexion with the bowl, the heating chamber or furnace as arranged and described.

No. 9,742.—Samuel R. Brick, of Philadelphia, Pa.—*Improvement in Gas-Burners.*—Patented May 24th, 1853.

The nature of this invention consists in providing the interior of the ordinary gas-burner with a long centre conducting-pipe surrounded by a long concentric capping-pipe, causing the gas to be suddenly deflected from the top of the conducting-pipe, and to descend, and afterwards pass through horizontal perforations in the base of the capping-pipe into the area of the burner, and ascend to the burning point; by which means the supply for burning is made uniform, though the pressure in the main gas pipes may vary. Blowing and waste of the gas are thereby prevented; and good combustion and steady light are obtained. *a* is a common gas-burner screwed on to the conducting apparatus *b*, with its female screw at base *e*, which screws on to the supply gas pipe; c is the capping-pipe with perforations horizontally *d d*.

Claim.—The arrangement and combination of the centre conducting pipe and its capping pipe inside of the common gas-burner, for the purpose described above.

No. 9,743.—John B. Blair, of Alton, Ill.—*Improved Machine for Engraving.*—Patented May 24th, 1853.

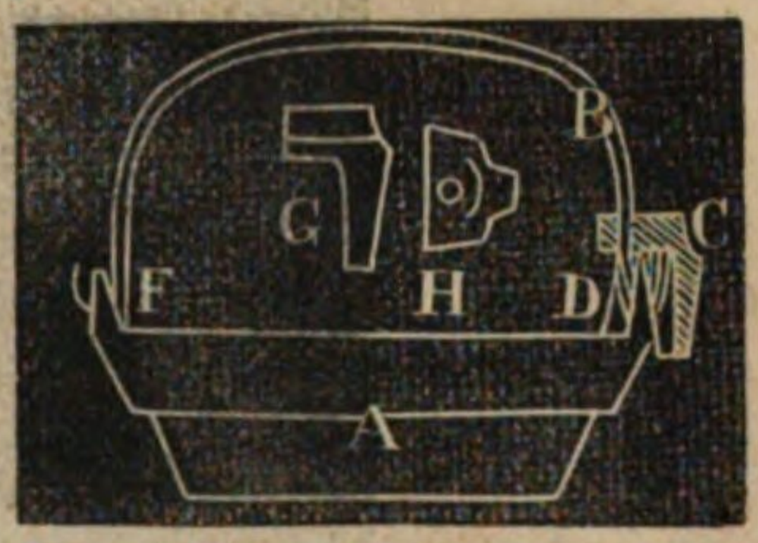
The object of this invention is to produce either mezzotint or other engraving with a greater uniformity and regularity than is done by hand, by the arrangement of a machine so as to be capable of performing the work of an engraver or other tool for the purpose.

Claim.—Combining the needle, whether sharp or blunt, with a pentagraph or other copying or tracing instrument, through the medium of double carriages moving at right angles to each other, so that the dots or punctures of the needle may be dispersed or aggregated at pleasure, for the purpose of forming the lights or shadows; the character of the lights and shadows being indicated by the sliding scale moving before the eye, or under the hand of the operator.

Also, the combination of the sliding bar, the sliding box, the cords, the spring lever, wheels, and other mechanism.

Also, in combination with the carriage and needle, the wheel with its lifting piece, and the cam wheel for changing the character of the marks, lines, or dots, at pleasure, upon the plate to be engraved—whether the same be operated in connexion with the pentagraph or not.

No. 9,744.—THOMAS H. DODGE, of Nashua, New Hampshire.—*Improvement in Kettle Bails.*—Patented May 24th, 1853.



This improvement consists in placing on the bail of the kettle or other vessel a sliding dovetail-shaped eye-piece C, which is made to slide on and around the bail B of the kettle or pan A, and when it is desired to have the bail in an upright and permanent position, to slide down to one of the sides of the kettle, and its dovetail or other shaped end to fit snugly in a female dovetail or other shaped groove cut in one of the ears or flanges of the kettle in the manner shown in the figure; the flanges having the dovetail cast either on the outside or inside of the kettle. The figure represents a frying-pan A, and B the bail in a vertical position, and secured by the dovetail-shaped sliding-piece C. This fastener C is secured on the bail, and the eyes of the ears D F on the pan. G is a side view of the sliding-piece, and H is a view of the same seen from below.

Claim.—The sliding dovetail, or other shaped piece C, in combination with the female dovetail or other shaped groove cast in the flange, for keeping the bail perfectly fixed in any position desired, and for any length of time, and also, admitting its being left loose in the ordinary manner.

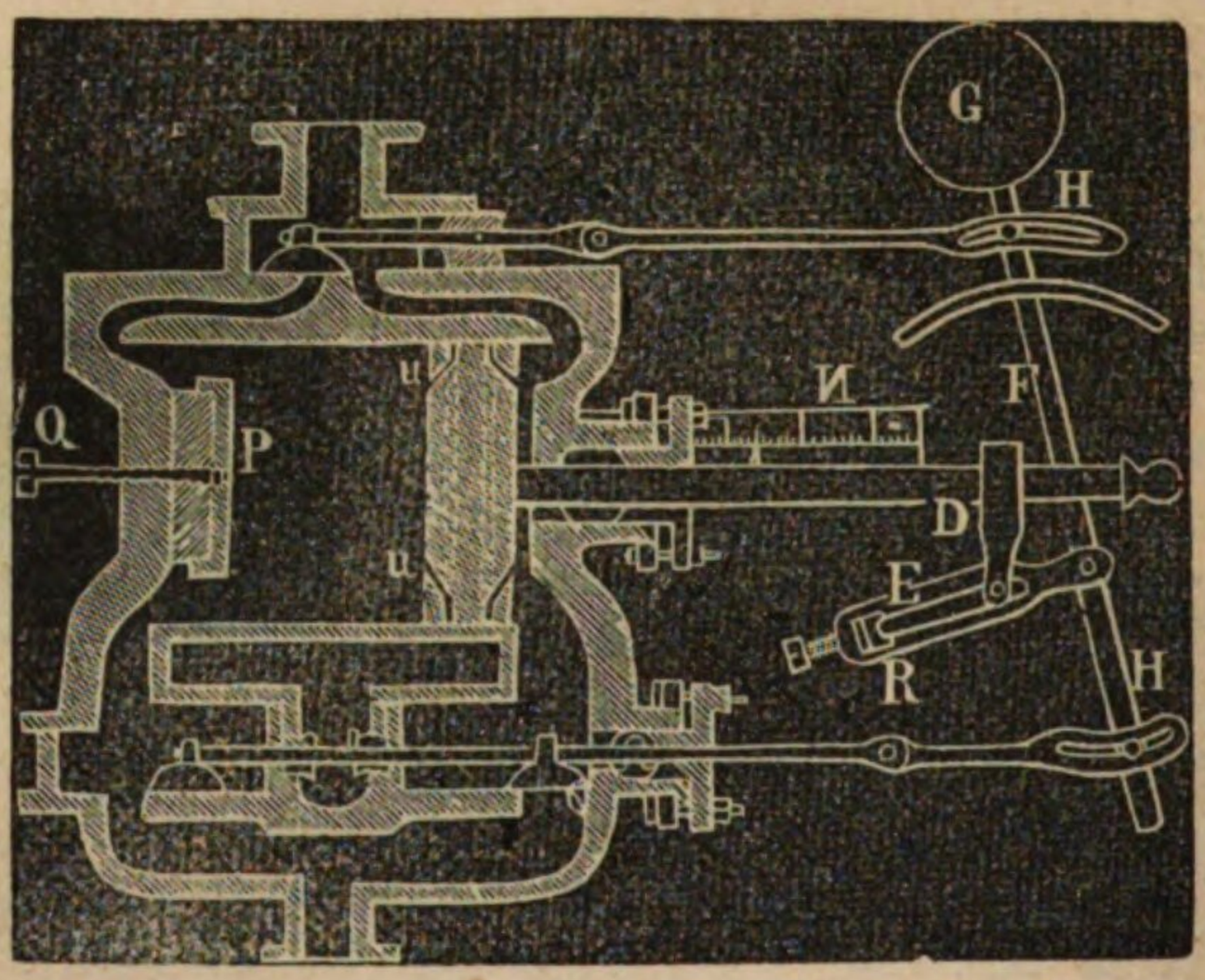
No. 9,745.—JOHN C. FLETCHER, of Burlington, Iowa.—*Improvement in Radiators for Stoves.*—Patented May 24th, 1853.

This invention consists in combining with the fire-chamber A and escape-pipe C, a series of concentric flues as represented in the figure.

Claim.—The interposition, between the fire-chamber and exit-pipe of a stove, of a series of concentric flues, so arranged as that the heat of one flue shall pass through the partitions, and in whole or in part be transmitted to the next flue or portion of the flue in advance, and prepare it for transmitting the draught through the series.

No. 9,746.—JOHN HARTIN, of New York City.—*Improvement in Water Meters.*—Patented May 24th, 1853.

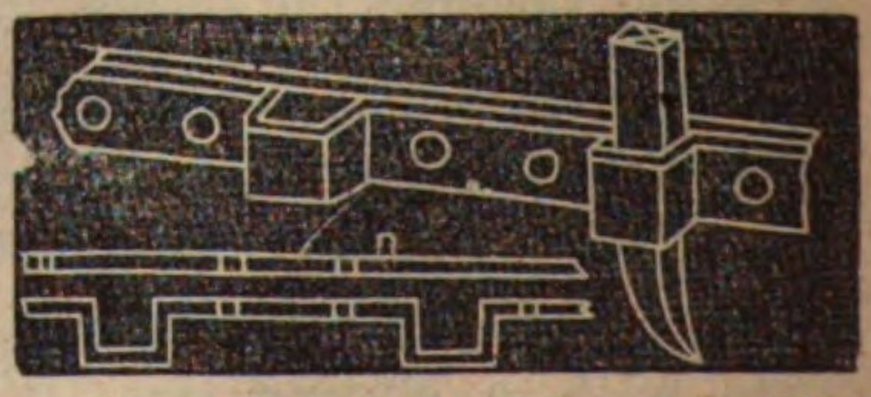
The nature of this invention consists in providing the cylinders inside with a sliding box or stop P which is adjusted in its position by a screw Q, by which means the stroke of the piston is limited, by causing it to strike against the box or stop, for the purpose of preventing the pin in the arm D from straining upon the stop R in the slotted arm E, after tilting the lever F. The sliding box P in the cylinder, and the sliding piece R in the slotted connecting piece E,



have to be regulated proportionally, so as to have the oscillating ball G, with its lever F, operate the valves properly. Slits are made in the two connecting rods H H, which operate the valves; a slit is likewise made in the connecting piece E. By the combination of the two slitted connecting rods H H and the piece E with the oscillating ball G and the lever F, a sudden change of the valves is caused, whenever the piston has moved to a certain place in the cylinder. The fluid is made to cause the piston to move tight in the cylinder, by means of the openings *u u* on the faces of the piston; these openings run obliquely towards the inside of metallic rings placed in grooves around the piston through the openings. The fluid presses against the inside of the metallic rings (which are cut through in one place), and causes them to expand and press tight against the cylinder. An index N is placed near the piston rod, and a finger on the piston rod, by which means the amount of fluid drawn from the cylinder is ascertained.

Claim.—The adjustable box or stop P in one end of the cylinder for the piston to strike against, for the purpose of preventing the pin in the arm D from straining upon the stop R in the slotted arm E after the tilting of the lever F.

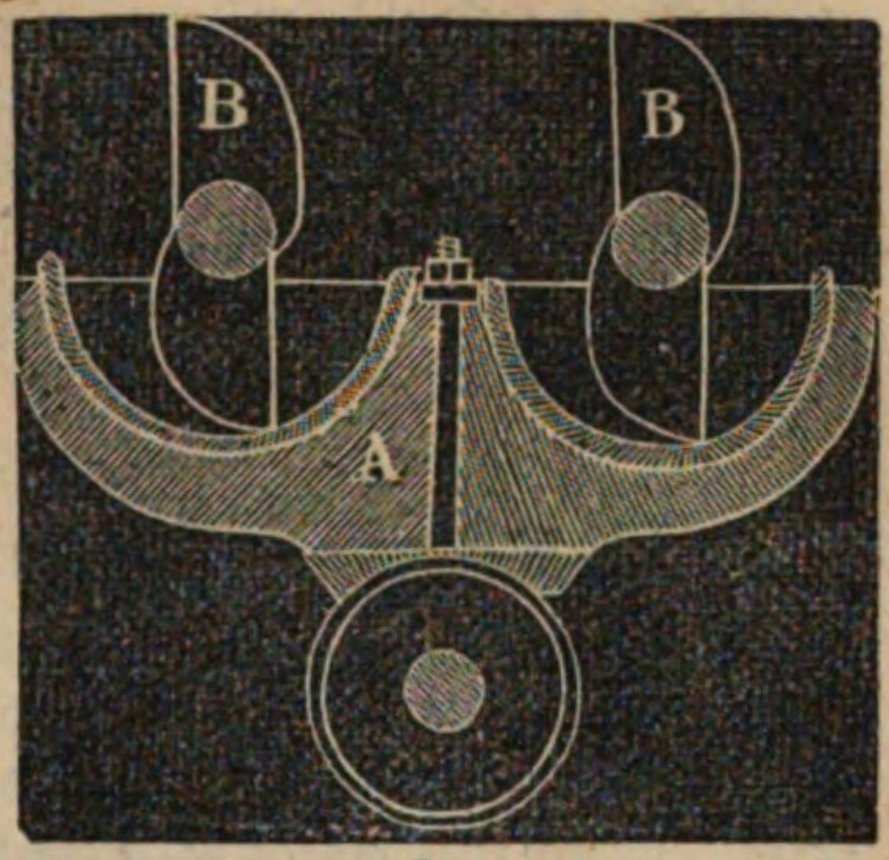
No. 9,747.—Lewis Lupton, of Winchester, Va.—*Improvement in the construction of Harrows.*—Patented May 24th, 1853.



This harrow may be made in any desirable form; it is constructed of bar or stout strap-iron, which is bent into angular recesses or sockets, for the teeth to be secured therein, as shown in the figure.

Claim.—Constructing the frame of a harrow of double metallic bars, or flat strips of metal, and forming teeth-sockets thereon by bending the metal or otherwise, and uniting the bars; and combining therewith the manner of bracing or staying the same by rods and couplings.

No. 9,748.—Stanislas Millet, of New York, N. Y.—*Improvement in Meat Cutters.*—Patented May 24th, 1853.



This improved cutter consists of a revolving dish A, having a stationary cover fitting tightly on the edges. A pair of cutters B B play through slits in the cover, upon the meat within. The dish is made to present itself to the action of these cutters in all directions by its constant rotation, which brings the meat to be cut constantly under the cutters, by a pair of scrapers fitting the bottom of the dish.

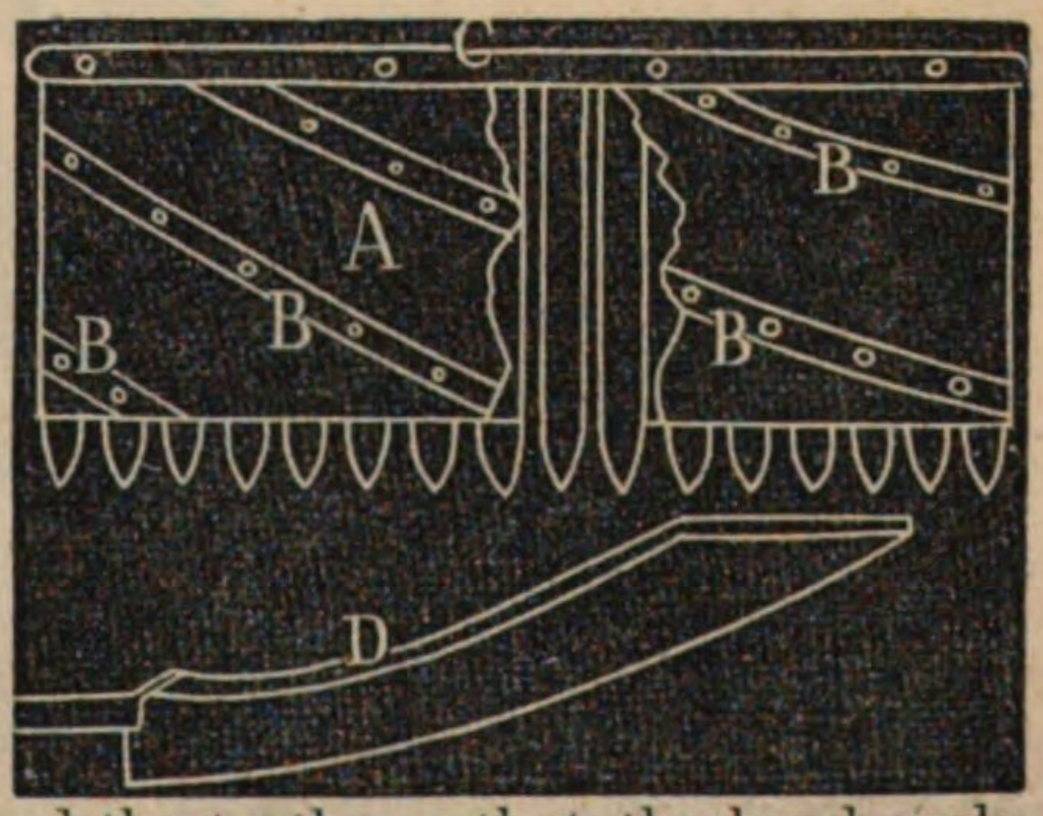
Claim.—The combination of a set of revolving knives or cutters with the top plate and revolving dish, operating for the purpose and in the manner described.

No. 9,749.—Thomas Nelson, of Troy, N. Y.—*Improvement in Watches and Chronometers.*—Patented May 24th, 1853.

(The nature of this improvement is set forth fully and clearly in the claim.)

Claim.—The method of constructing watches or chronometers of any kind, so as to permit of the employment of a spring barrel of a size that shall occupy nearly the entire interior diameter of the watch-case or frame; which is effected by placing the movements upon the top of the barrel, and communicating the motion of the barrel to them by means of a ring fixed on the interior of the case, with teeth on its inner edge, concentric with the barrel, into which teeth the teeth of one or more wheels of the movements may cog, or take.

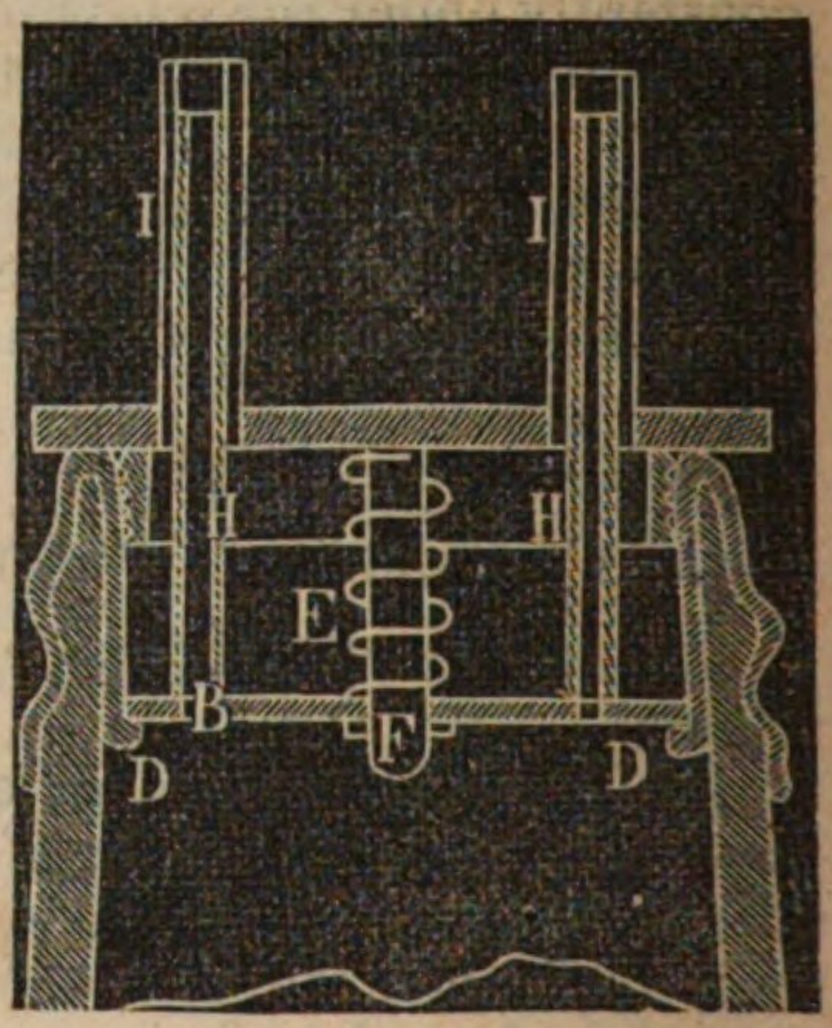
No. 9,750.—Jeptha A. Wagener, of Pultney, N. Y.—*Improvement in Clover Harvesters.*—Patented May 24th, 1853.



The improvement consists in a cylinder A, set with spiral knives B B B, arranged to act in combination with teeth curved to correspond with the circle traversed by the edges of the knives upon the cylinder, which act in concert with a straight stationary knife placed at the base of the teeth, so as to shear the heads of clover from the stalks, there being only sufficient space for the heads between the cylinder and the teeth, so that the heads only are gathered; also in making flanged teeth D, and cutting the top away, so as to form a seat for the stationary knife, and allow the teeth to spring and vibrate towards and from each other.

Claim.—The arrangement of the hollow or solid cylinder, set with knives on its periphery, and just near enough to the fixed knife, or to the concave of the fingers, to allow space enough to admit the clover heads to pass through without being crushed; and so that, by the combined action of the forward movement of the machine and the adjustable guard plate and the knives, the stems may be drawn in and severed close to the heads. Also, making the teeth so as to vibrate as described.

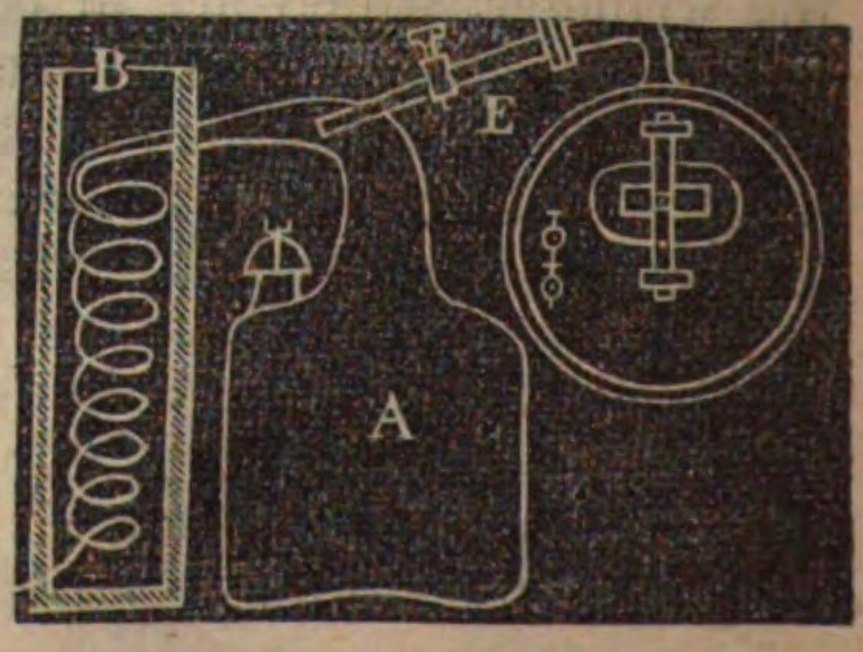
No. 9,751.—ALEXANDER J. WALKER, of New York City.—*Improvement in Spirit Lamps.*—Patented May 24th, 1853.



This improvement relates to the "safety spirit lamp." The inner tubes H, which carry the wick, are secured to circular movable plate B, said plate being connected to the cap or cover by means of a vertical rod F having a spiral spring E situated between the cap and the lower plate, which forces the plate down over the vertical rod when the cap is unscrewed, and thereby draws the inner tube H downward and consequently causes the other tubes I I to extinguish the light instantaneously; this spring also serves to keep the circular protection plate firmly down against a circular flange D formed round the inside of the neck of the lamp, and thereby prevents the fluid possibly getting above said plate, except through the inner tubes, and becoming heated and exploding.

Claim.—The employment of the plate B, which serves as a protection against the fluid rising too high and becoming heated and exploding, and also as a support for the inner tubes, in combination with the spiral spring E and rod F, the rod serving to connect the plate with the top of the lamp, and the spring to hold the plate B firmly down on the flange D, and also to throw up the cap and extinguishing tubes instantaneously after the top has been unscrewed.

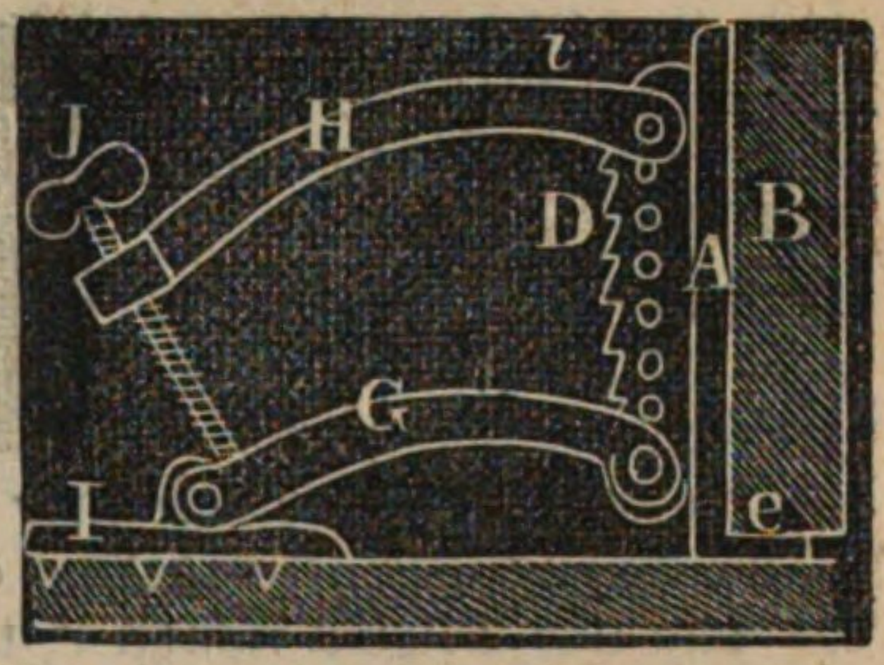
No. 9,752.—MADISON PAGE, of Williamsburgh, N. Y.—*Improvement in the Process of Distilling Rosin Oil.*—Patented May 24th, 1853.



For this process a common still A, with a condensing worm B, is used in connexion with the steam pipe E, whereby steam is introduced in such a manner that the steam does not come in contact with the rosin, but only with the vapors arising from the rosin. The first process is to extract the acid from the rosin, next the naphtha, and lastly the oil.

Claim.—The employment (in the manner and for the purposes described) and the introduction of steam into the commencement of the goose-neck, above the rosin in the still, so that the vaporized oils from the rosin will pass through and be commingled with the steam in the passage to the worm, for condensation for the purpose of purification, &c., as set forth.

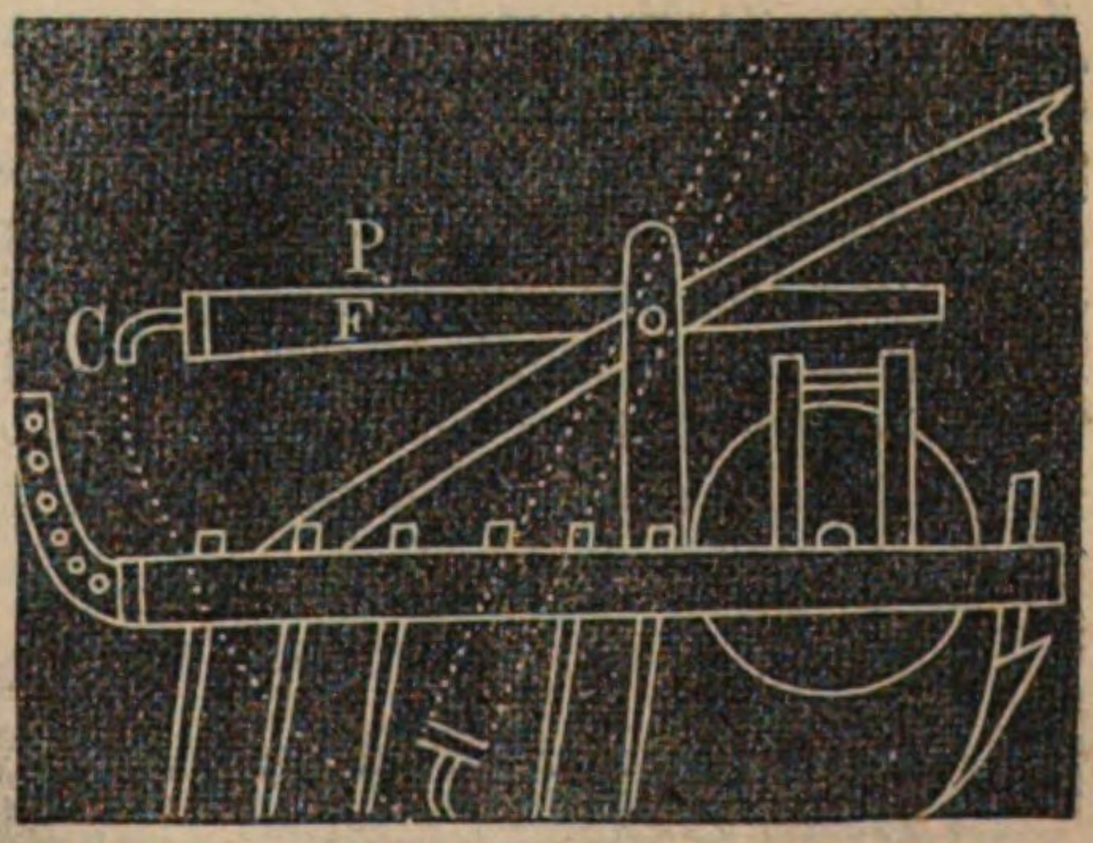
No. 9,753.—DUNCAN E. MCDOUGALL, of Troy, N. Y.—*Improved Door Fastener.*—Patented May 31st, 1853.



The nature of this invention consists in a portable contrivance for travellers and others, to fasten doors on the inside. The plate A shown in the figure bears against the inner face of the door, having its lower end bent in the shape of an elbow, so as to form a hook or lip *e* to be inserted under the bottom edge of the door; on the back of plate A is a bar with ratchet teeth D, and a series of holes; to this bar two curved or other suitably shaped levers G H are secured by movable pins. The lever G is attached at its other end to the claw or floor-plate I, which is provided with sharp spikes which are driven into the floor. The lever H is connected to the ratchet bar of plate A by a pin, the bar H having a recess at I into which either of the ratchet teeth fit, when the screw J, which is at the other end of the lever H, is set in one of the recesses of lever G, and turned until the recess I catches in a tooth of bar D, and screwed tight to form a pressure between the two levers, giving a horizontal direction of plate A against the door B, whereby the door is firmly secured.

Claim.—The arrangement of the above parts, as constructed and operating for the purposes therein set forth.

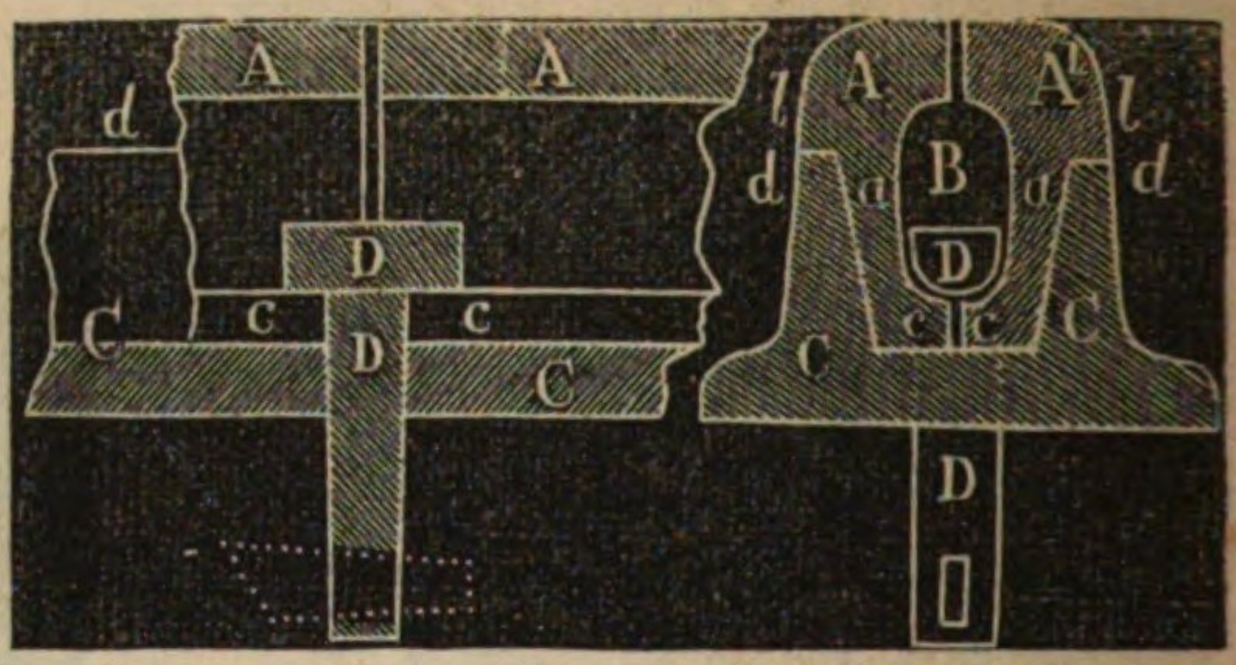
No. 9,754.—PHILIP H. KECK, of Morgantown, Va.—*Improvement in Cultivators.*—Patented May 31st, 1853.



This cultivator consists in the combination of a harrow, a roller, and a plough, constructed and arranged (as one utensil) to mutually assist each other. The balance-pivot P is for facilitating the turning around at the end of the field or at any other place. The lever F is allowed to fall and comes in the position of the dotted line, and the bill-hook C enters the ground; and by the forward motion of the cultivator it is raised from the ground, when it can be easily turned around.

Claim.—The combination of the balancing pivot P with a cultivator constructed as above described, for aiding in turning the same.

No. 9,755.—RICHARD H. MIDDLETON, of Alexandria, Va.—*Improvement in Compound Rails for Railroads.*—Patented May 31st, 1853.



This invention consists in the construction and arrangement of a tripart rail, the two upper portions of which resemble the ordinary split rails, and the lower part is a continuous box, to contain and bind together the two upper parts as shown in the figure. Either half of the split-rail (A or A′) is formed of a bar or side *a*, projecting over either side and forming a shoulder *l*. The bar *a* has a flanch *c*, the top surface of which forms a hollow curve for the heads of the holding-down bolt D: when the half rails A and A′ are placed in their position, they form a tubular channel B between them.

Claim.—The combination of the continuous case-rail with the split rail, the halves or parts of the latter being constructed with shoulders that rest on the sides of the case-rail, while their lower edges fit into and rest upon the bottom of the same.

No. 9,756.—CHARLES NEER, of Troy, N. Y.—*Improvement in Fire-places and Stoves.*—Patented May 31st, 1853.

The figure represents a vertical section of this improved fire-place. B is the fire chamber; C the grate; G hot-air chamber; F flues, and K draught damper.

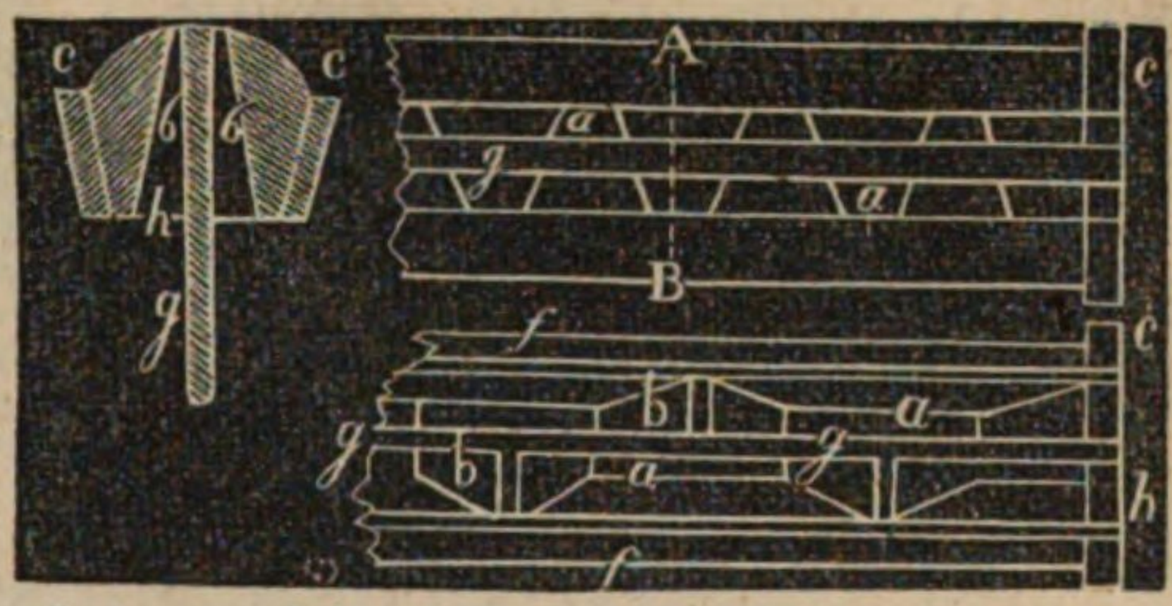
Claim.—Combining with the fire-box of a fire-place, heating stove, or furnace, an inverted pyramidal shaped air-chamber, open at top and suspended over the fire, so that the inclined sides thereof shall radiate the heat and throw it against the fire-box plates on all sides: with the fire-box surrounded by a series of one, two, or more air-heating and smoke and gas flues G F, for the purpose of exposing all the heated plates to the current of air.

No. 9,757.—THOMAS P. MURPHY, of New York, N. Y.—*Improvement in Bank Locks.*—Patented May 31st, 1853.

This improvement is too complicated to permit of a brief description.

Claim.—The slides and pins, and their operations. Also, the pressure plate, pressure bolt, and spring attached to the plate, arranged and operating as described, or in any other way substantially the same, and for the purpose set forth.

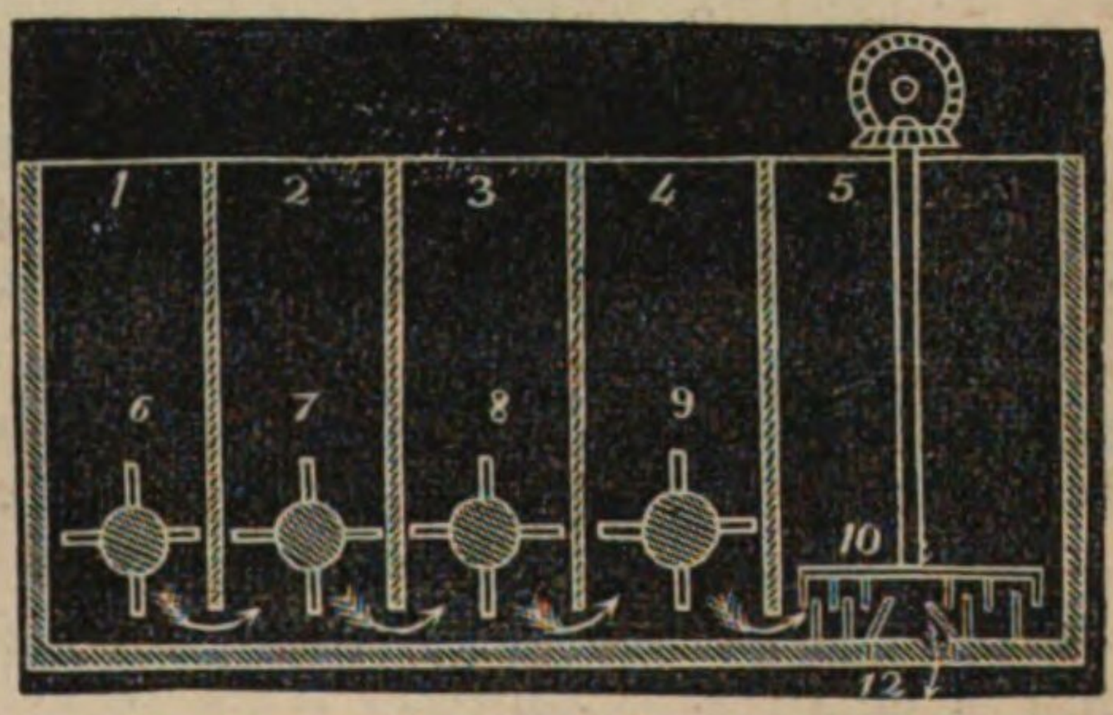
No. 9,758.—Marie Louise Roucout, of Paris, France.—*Improvement in Grate Bars.*—Patented May 31st, 1853.



This improvement consists in constructing the bars of furnaces and other grates of an arched or partly arched form, and with a double row of parallel air-holes made in the length of the bars, which, combined with the arrangements, prevent clogging of combustible to the bars, and improves the combustion, and economizes fuel.

Claim.—The construction of bars of furnaces and other grates of an arched or partly arched form, provided with two parallel rows of air-holes.

No. 9,759.—Arnold Buffum, of New York, N. Y.—*Improved Gold Washer and Amalgamator.*—Patented May 31st, 1853.

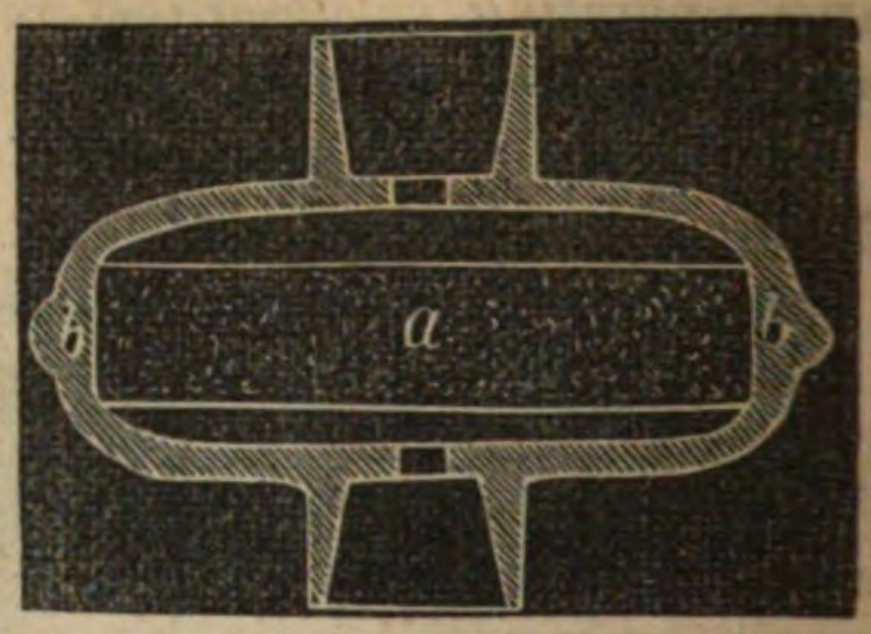


1, 2, 3, 4, are centrifugal amalgamating compartments; 5 is a centripetal discharging compartment; 6, 7, 8, 9, are agitators. The discharging aperture is in the centre of the bottom of the centripetal compartment at 12, surrounded by a conical inclined plane. Surrounding this inclined plane is a series of circular channels within one another, and connecting with each other by openings: they are about two inches high. Above is a revolving guiding table 10, which brings the ore in close contact with the quicksilver. The bottom of the amalgamator is covered with quicksilver; the water and ore are introduced at 1. The inclined plane of conical shape prevents the quicksilver from being discharged with the impurities, at 12.

Claim.—Furnishing the centripetal discharging compartment with a horizontal, revolving, water-moving and ore-guiding table, in combination with a discharging aperture surrounded with a conical inclined plane at the centre.

Also, the arrangement of the circular guiding channels, with connecting openings, so adjusted as to secure an irregular spiral passage from the periphery to the aperture at the centre, for gold-separators —whether used separately or in combination with the compartments.

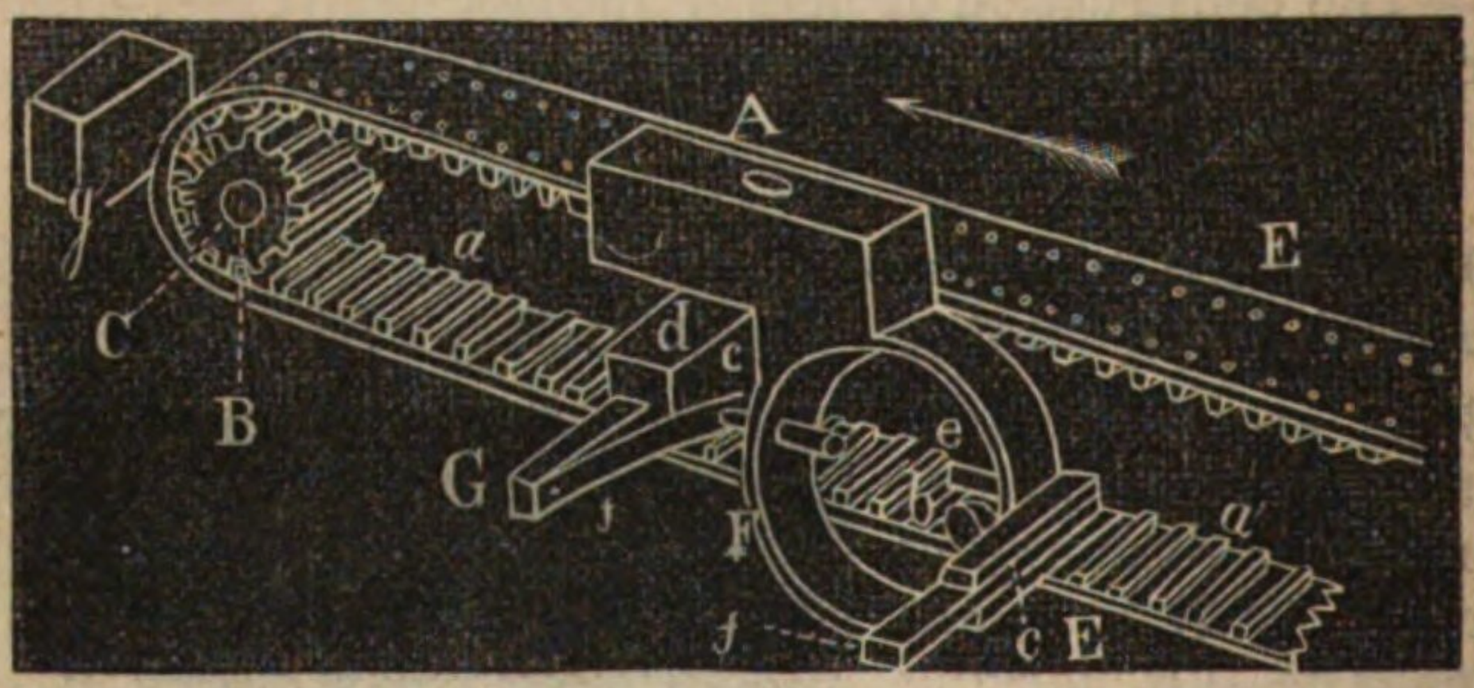
No. 9,760.—William H. Jennison, of New York, N. Y.—*Improvement in Compositions for a Filter.*—Patented May 31st, 1853.



This composition consists of animal charcoal (say bone black) thirty pounds, mixed with sixty pounds of finely ground glass, to which is added boiled starch sufficient to cause the particles to adhere together, when it is moulded into the desired shape, and dried. The figure *a* represents the filtering medium and *b* the case, which is made of gutta percha.

Claim.—The combination of animal charcoal, glass, and starch or its equivalent, treated in the manner set forth, for a filtering composition.

No. 9,761.—Henry Baker, of Catskill, N. Y.—*Improvement in Converting Rotary into Reciprocating Motion.*—Patented June 7th, 1853.



This invention is more particularly designed for driving the bed of a printing-press, or the bed of any other machine to which it is desired to give reciprocating rectilinear motion.

The motion is communicated in the first place from the revolving shaft B to one of two wheels or pulleys C, around which an endless belt or chain E is placed; these wheels and belt or chain being so arranged, that the belt will move in a direction parallel or nearly so with the desired reciprocating motion. To the object which is to receive the reciprocating movement, is attached a ring F, which lies nearly close to the belt or chain; the minor diameter of the ring being about equal to that of the pulleys on which the belt or chain runs. Two pins *e e'* are fitted to slide freely through the periphery of the ring on opposite sides; both pins being parallel with the band, and being caused by springs applied to them to project a short distance into the ring. To the endless band E is attached a stud *b*, which projects into the ring close within the periphery, at right angles to the two pins; and as the band moves, this stud catches one or the other of said pins, and propels the ring and whatever is connected with it. As that part of the endless belt or chain which is on one side of the wheels or pulleys moves in the opposite direction to that on the other side, the stud will move in opposite directions

alternately. The sliding pins are so placed that when the stud moves in one direction, it catches with one, and when in the other direction, with the other; and each of the pins being drawn back from the ring by a lever G attached to it catching against a stop *g*, at the time the stud reaches either pulley or wheel, it is passed by the stud, which runs round the wheel or pulley with the belt or chain, and catches the other pin, and by its reversed movement drives back the ring in the opposite direction to that in which it moved before the stud arrived at the wheel or pulley. The ring F is secured to the bed A, having two knuckle-pieces *c c'*, which receive the fulcra *d d'*.

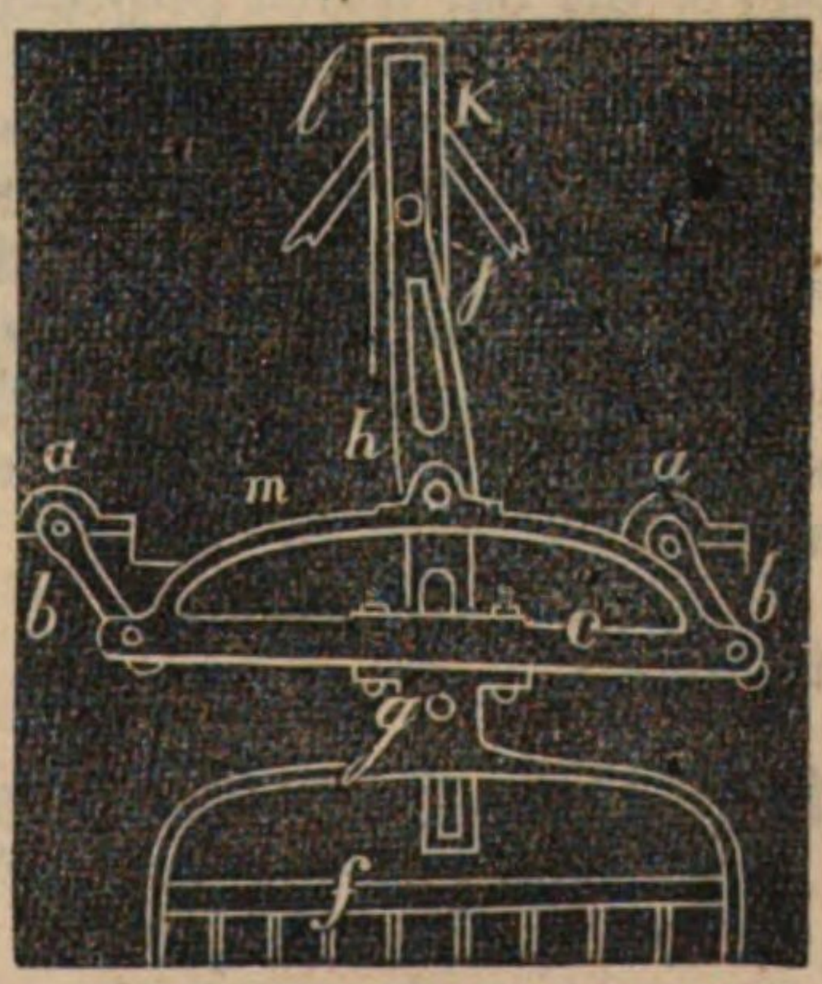
Claim.—The ring F with its sliding pins *e e*, in combination with the stud *b*, attached to the endless chain. The points or ends of the pins *e e'*, being caused to project through to the interior of the ring to catch the stud *b*, and being withdrawn alternately to allow it to pass, by springs, levers, and stops.

No. 9,762.—Thomas A. Dugdale, of Richmond, Ind.—*Improvement in Washing-Machines.*—Patented June 7th, 1853.

In this washing-machine, two wash-boards B B, with rollers D D D D, are placed in a suitable box A: the centre wash-board is attached to the lever G; the clothes are secured to this centre wash-board, which is worked up and down between the two B B. The cords E E pass over the rollers on the top of the wash-boards, and are secured to the side of the box, to prevent the two wash-boards B B from rising. F F are floats of wood secured to the inside of wash-boards B B by means of cords as shown in the drawing, which cause the wash-boards to be drawn together.

Claim.—Combining the wash-boards, cords, and floats, as above.

No. 9,763.—Henry W. Hewet, of New York, N. Y.—*Improvement in Propellers for Steamboats.*—Patented June 7th, 1853.



The nature of this invention consists in giving to the paddles, in their circuit, a greater longitudinal than vertical motion, imparted by a crank motion, modified by the vibratory motion of a beam or beams, so that the motion of the paddles shall be generated by the combined motion of the crank and the beam. Also, in making the vibrating beam (in the above combination) to slide on its fulcrum; by reason of which combination the paddles begin to move back in the direction of the propelling action, before the cranks in their descent reach the horizontal line or dead point, in carrying

the paddles down towards the water, and continue this motion in the direction of the propelling action, until after the cranks in rising have passed the horizontal line or dead point, thus avoiding what is called back water. There are three cranks on two shafts connected by three bars like *c*; *f* the paddle bar. Each carriage is provided with two studs *g*, to give longitudinal motion in addition to what is imparted to the paddles by the cranks; and the carriage is embraced by the lower end of the beam *h*, which is made double at the lower end for that purpose, and the two parts at this end are slotted longitudinally to embrace the studs *g* so as to strike thereon freely. The upper end of the beam *h* is attached to a crosshead *j*, which slides between ways K in frames *l* erected above the guards; the beam is also attached to an arch-piece *m* extending over the carriage and bar *c*, and connected with the end thereof.

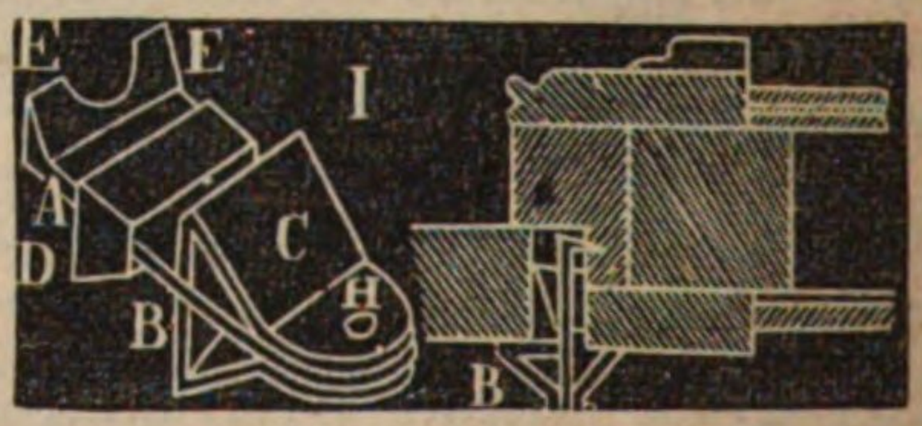
Claim.—The foregoing description embraces the claims of the inventor.

No. 9,764.—William S. Hubbell and Amos Barrett, of Kingsville, Ohio.—*Improvement in a Composition for treating Wool, to fit it for the different Manufactures.*—Patented June 7th, 1853.

This composition consists of oil and alcohol; two-thirds by measurement of oil, and one-third of alcohol. The object is to obviate the necessity of washing the wool previously to the various stages of its manufacture from the raw state to its finish in cloth.

Claim.—The above composition, for the purpose specified.

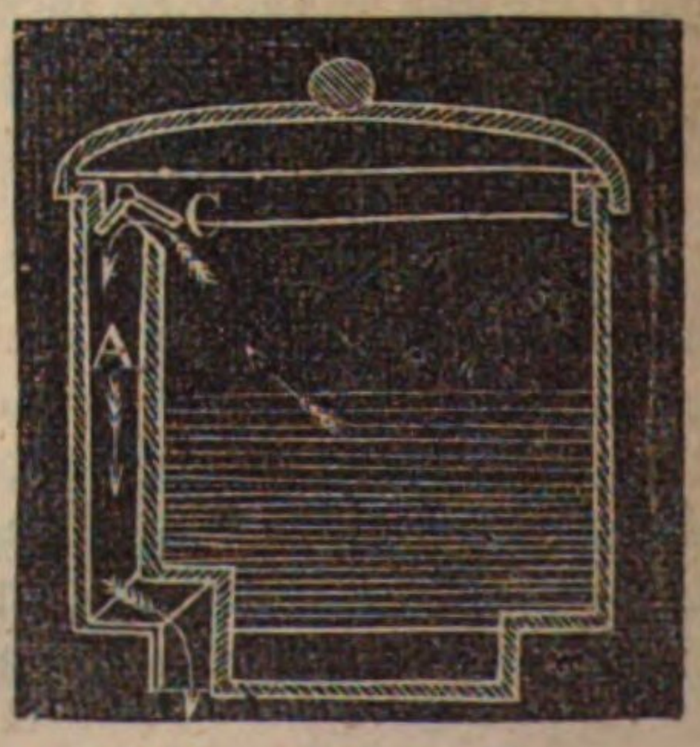
No. 9,765.—Samuel P. Kittle, of Buffalo, N. Y.—*Improved Door Fastener.*—Patented June 7th, 1853.



For the application of this fastener, the door is provided with a metal bar A (see fig.) sufficiently thin to allow the door to shut; this bar has spurs E E, which are pressed into the wood forming the rabbet by closing the door (see sectional figure). The end of the bar which projects beyond the face of the door when closed, secures it so long as the edges retain their hold in the rabbet. Figure 1 represents a perspective view of the fastener with cap on. A is a bar; B, stop or rest; C, brace; D, cap; H, the rivet which holds the pieces B and C to plate A, and upon which B and C turn.

Claim.—The construction of the bar A, having the edges E E, with the stop or rest B, having the lips F and G arranged as described.

Also, the combination of the cap D with the bar A.



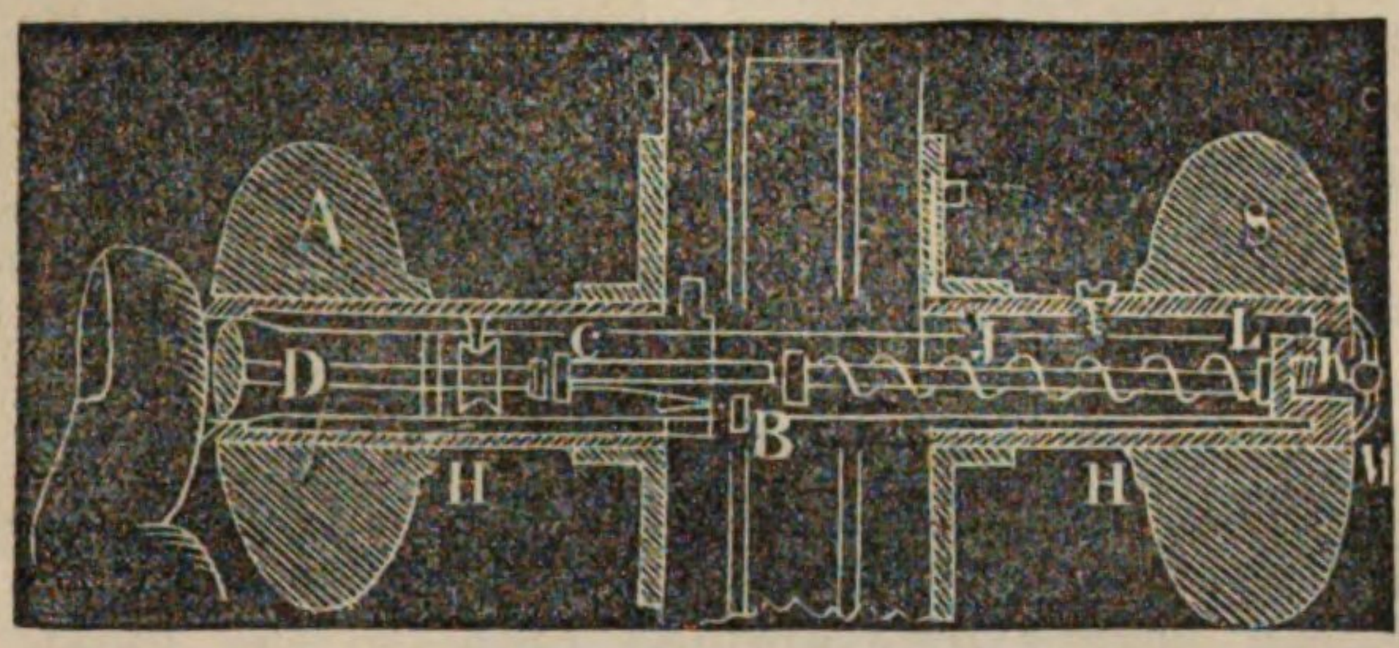
No. 9,766.—R. W. Belson, of Philadelphia, Pa.—*Improvement in Culinary Boilers.*—Patented June 7th, 1853.

This invention relates to stove boilers, and

consists of a flue and valve, provided for the escape of the steam and odors into the chimney. A is the tube, and c the valve, which is controlled by the movements of the cover.

Claim.—The employment of a valve in combination with the escape tube of culinary boilers, the valve being controlled by the cover or in any equivalent manner.

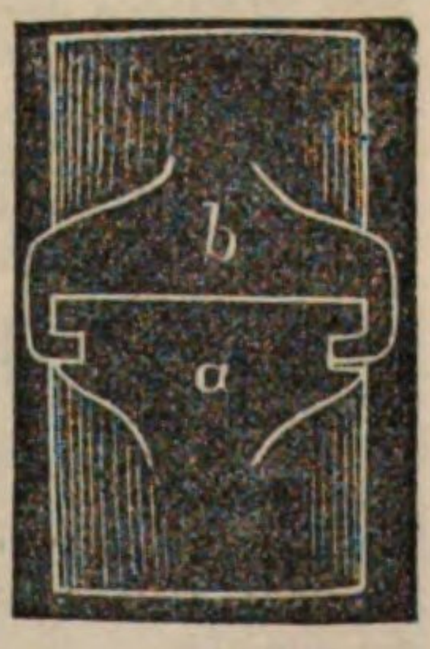
No. 9,767.—Oliver Ellsworth, of Hartford, Conn.—*Improvement in Operating and Locking Knob Bolts.*—Patented June 7th, 1853.



The figure represents a section of the lock. D is the thumb-piece or disconnector; when pushed in, it forces the rod c towards the inside knob s, carrying the pin attached to the rod out of the teeth of the outside knob tube A, and into the "cavity" or "oblique sides" contained in the side of the lock case, and the latch has now become a lock. The only way of opening the lock from the outside when thus disconnected is by the introduction of a key which fits over a thumb pin and on to the end of the spindle. The inside knob s has an extender K, which serves to disconnect the outside knob A, and to lengthen or shorten the rod c.

Claim.—The inventor claims the above described combination and arrangement, for the purpose not only of an ordinary door fastening, but made so as to be converted into a lock.

No. 9,768.—Ralph J. Falconer, of Washington, D. C.—*Improved Hose-Coupling.*—Patented June 7th, 1853.

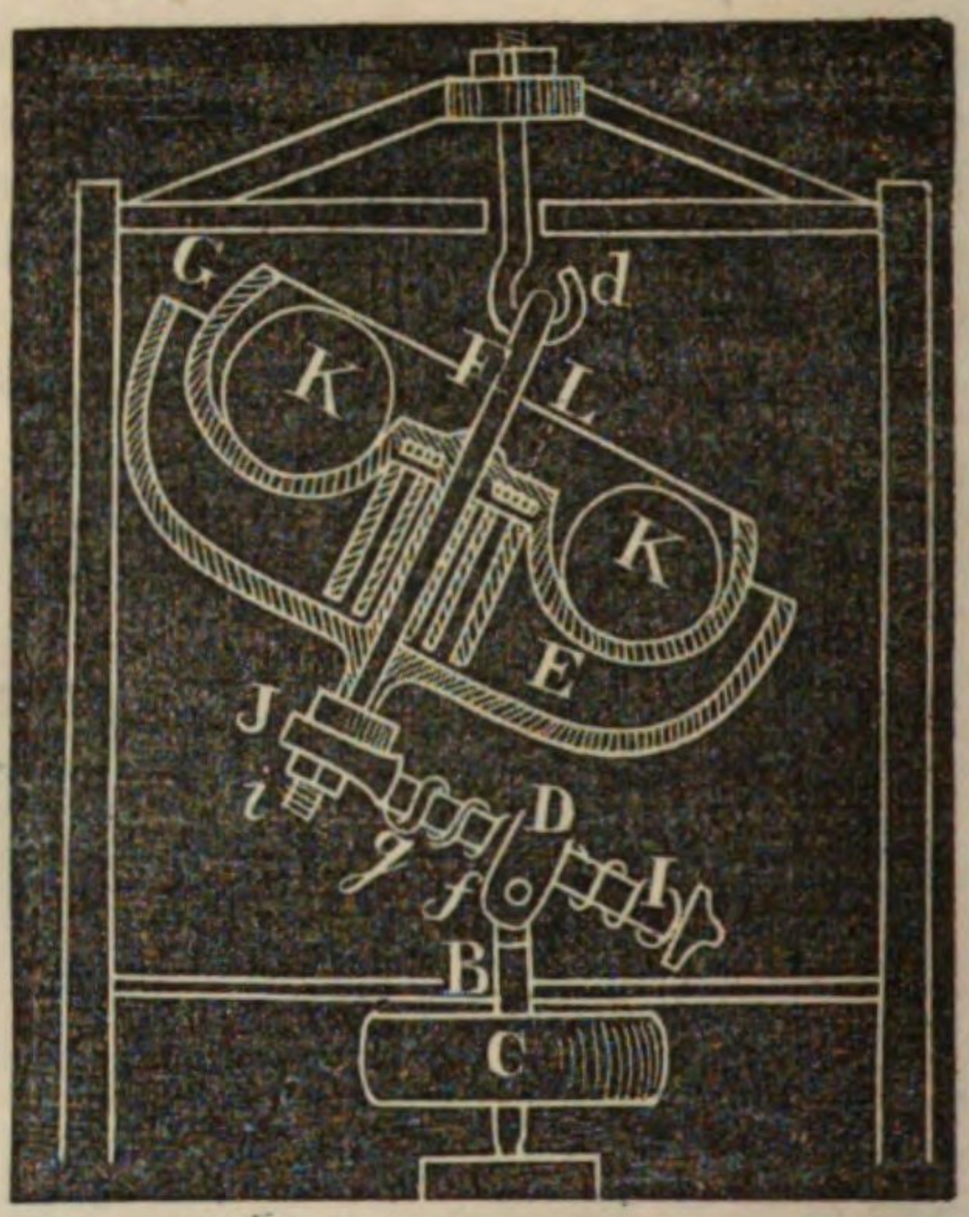


The hose are (by this improvement) coupled by means of the taper or draw slide, to hold and bind the two parts together. (See fig.) *a* and *b* are the parts, attached to hose and locked together, which may be quickly done even while the water is flowing through the hose.

Claim.—The employment of the slide coupling in combination with the collars of hose, in the manner and for the purposes set forth.

No. 9,769.—P. G. Gardiner, of New York, N. Y.—*Improved Arrangement of Quartz Pulverizer and Gold Amalgamator.*—Patented June 7th, 1853.

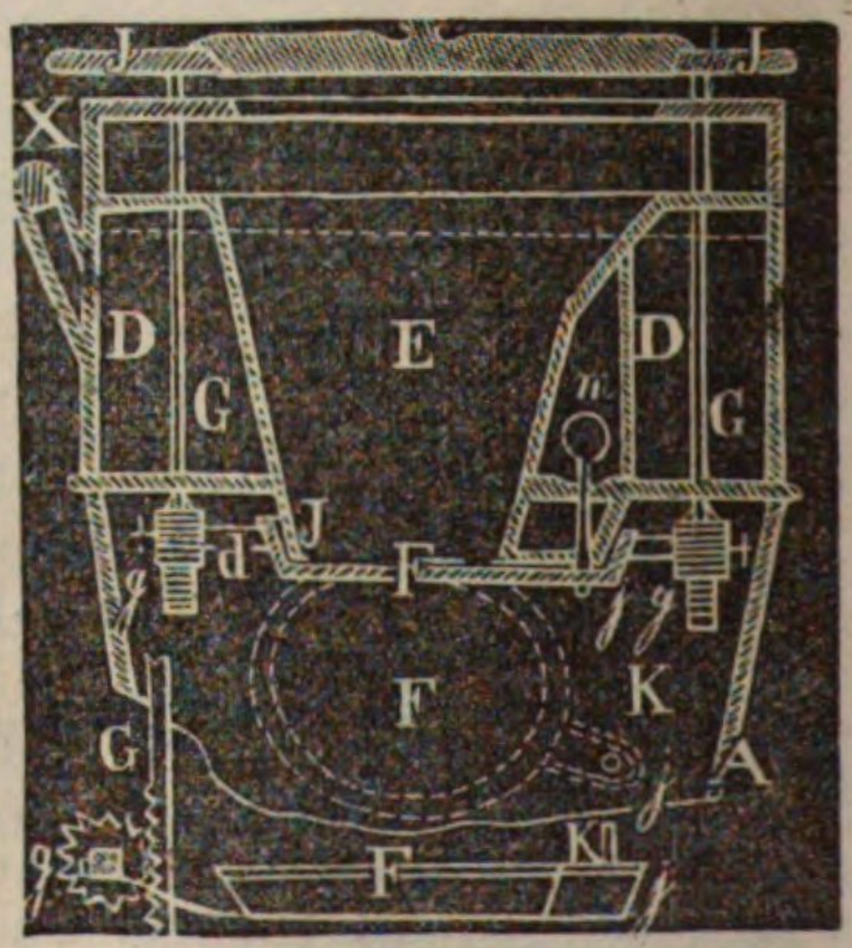
This improvement consists in the arrangement of a pulverizing



basin and an amalgamating basin, with a screen interposed between them; the basins operating together, upon the same shaft. In the figure, B is the driving shaft, and receives its motion through belt-pulley C; the upper shaft is forked to receive a block D. E is the lower or amalgamator basin with centre shaft F, to which is secured the inner or crushing basin G, with the balls K K. The lower end of shaft F is connected by a crank-rod I to the shaft B, which works freely in a hole made in the block D, at right angles to the pivot *f:* at one end is pivoted a metal box J, which is bored to receive the journal *i* on the lower end of shaft F. A spring *g* is applied between the block D and the shoulder on the rod I. The quartz is fed into basin G. The stream of water let into the basin G washes up all the finely pulverized particles, and carries them through the screen L into the amalgamator E.

Claim.—The arrangement of the vibrating pulverizing basin, and amalgamating basin attached thereto, with the screen interposed between the two, connected and operating as described.

No. 9,770.—HERMAN GOLDSMITH, Jun., of New York City.—*Improvement in Water Closets.*—Patented June 7th, 1853.



(See fig.) D is the water-chamber, which contains a valve *m*, which opens when the basin F closes, and allows a requisite quantity of water to pass round the pan or basin and the flange of the orifice; the effluvium is prevented from escaping by the closing of the pan or basin, thus hermetically closing the orifice. E is the opening in the centre of the water-chamber, of a conical shape. The pan F is attached to a shaft *d*, which has spiral springs wound around it, and pinions *g g*, one at each end, into which racks G G mash. When the board J J is depressed, the two racks G G work the pinions *g g* on shaft *d* to which the pan F is attached, and opens the pan F; when the basin rises, the pan closes.

The water-chamber is closed air-tight at x, to prevent an undue quantity from escaping.

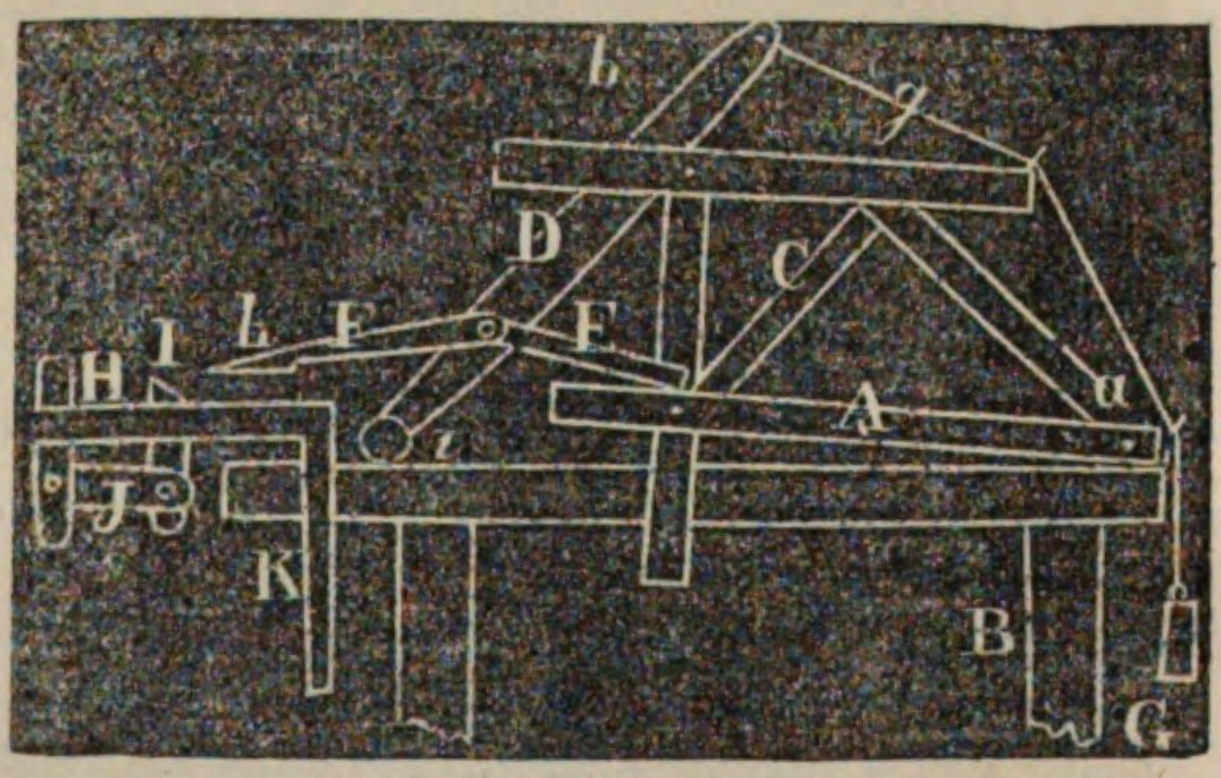
Claim.—The claim of the inventor is substantially included in the above description.

No. 9,771.—Leon Jarosson, Jersey City, N. J.—*Improvement in Painting on Cloth.*—Patented June 7th, 1853.

The woollen cloth first undergoes a series of operations of a preparatory nature in chemical preparations, &c. The mordant is composed of muriatic acid, sulphuric acid, and block tin, in about the proportions of 18 lbs. of the first, 9 lbs. of the second, and 2½ lbs. of the third; the whole being warmed in a sand-bath, whilst chlorine gas is introduced by a pipe to saturate it.

Claim.—The painting upon cloth, previously prepared with the mordant, that will combine chemically with colors laid one over the other, and blended by the means described; by which great richness is given to the figures, whilst the tint of each is carefully preserved; and developing and fixing the colors by steam; and restoring the cloth to its natural pliable state by washing out the excess of coloring matter.

No. 9,772.—Gerard Sickels, of Brooklyn, N. Y.—*Self-adjusting Platform for Ferry Bridges.*—Patented June 7th, 1853.

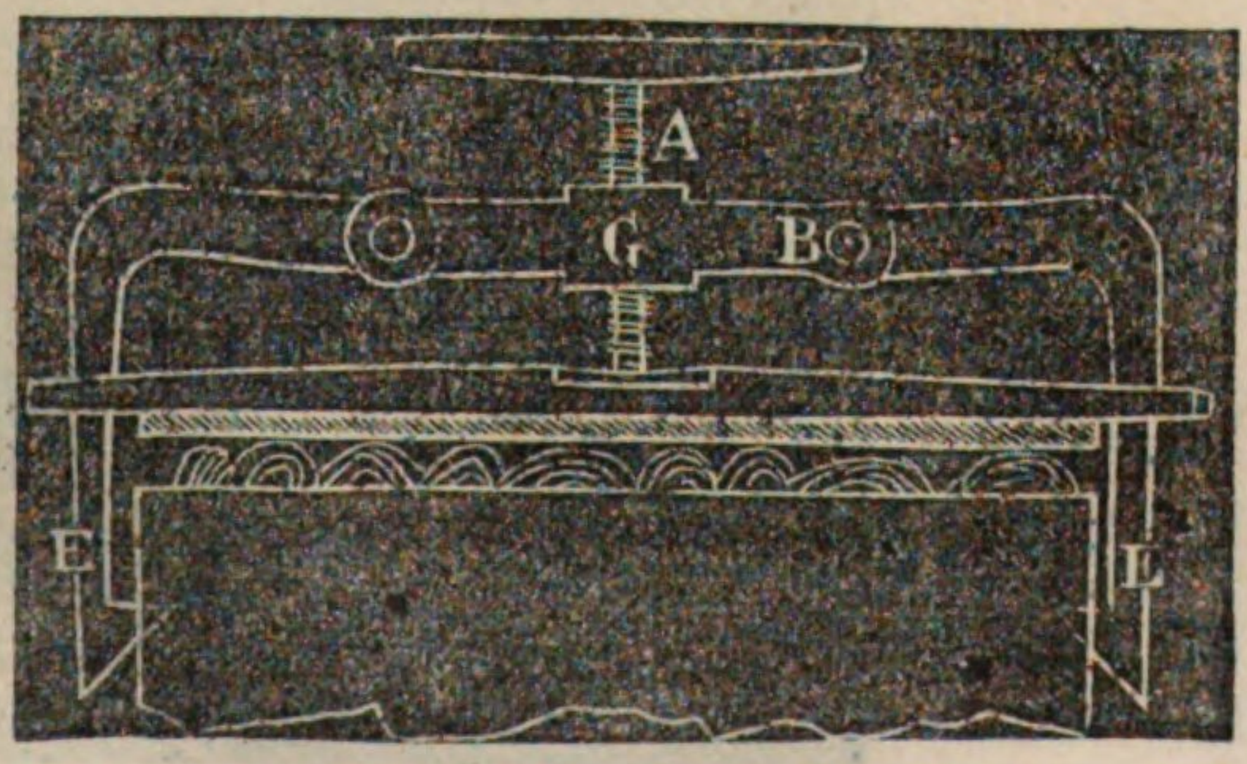


This platform is constructed in such a shape that when the boat approaches, it covers the entire space between the boat and the bridge.

A represents the bridge working by pivots *a*; C the frame which supports the lever frame D, whose pivots or bearings *b* work in oblong slots. E F is the platform. To the lever frame D are attached cords or chains *g g*, with counterpoise G. H represents the ferry boat. I is a vertical pin secured by a pivot to lever J, having a fulcrum at *j*. When the boat approaches, the cut-water K strikes the cross-bar *i*, and forces the lower end of the frame inward and downward, and raises the weight G.

Claim.—Substantially the improvements above described.

No. 9,773.—George W. Wight, of New York City.—*Improvement in Screw-Presses for Packing Boxes.*—Patented June 7th, 1853.

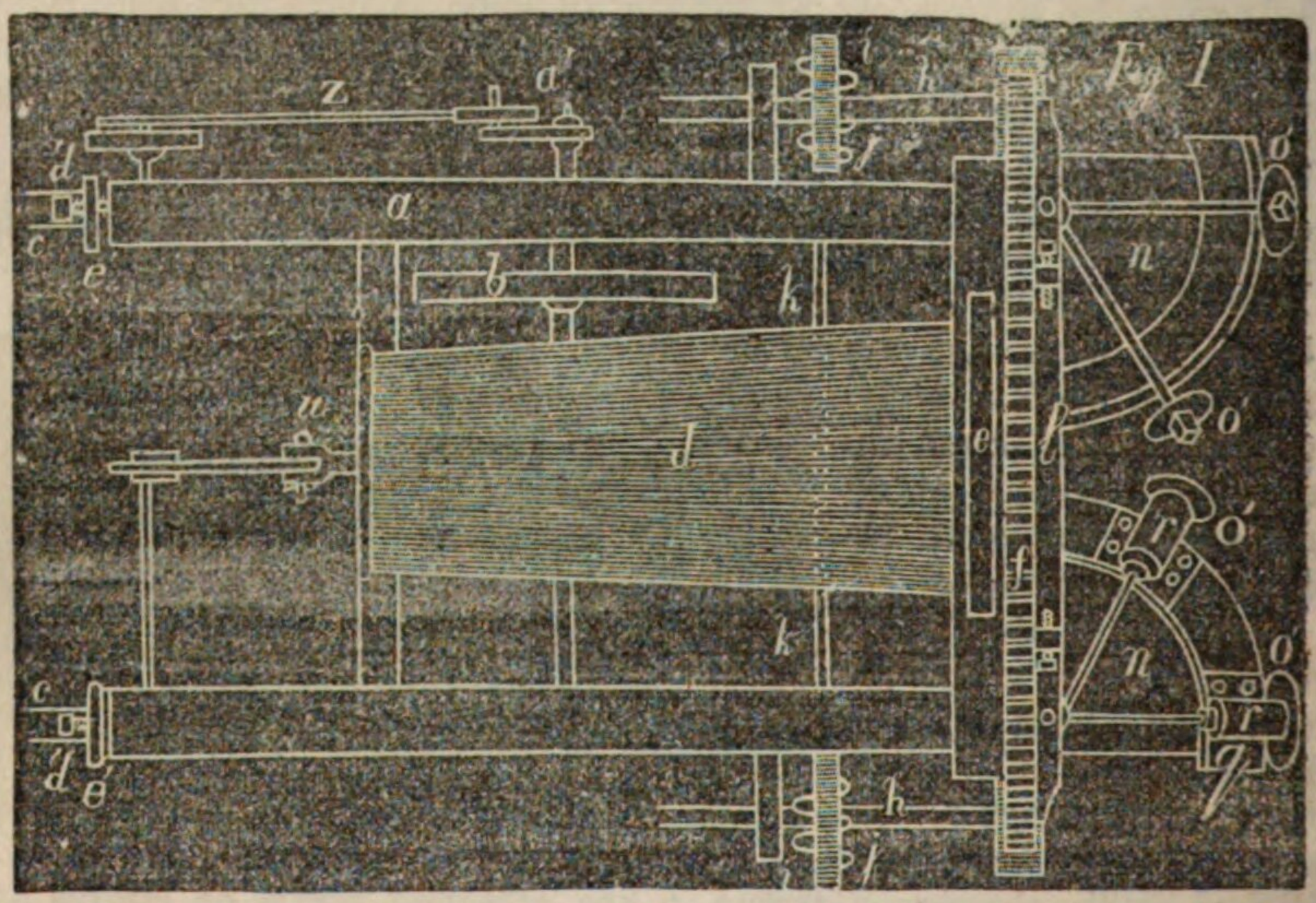


The application of this press may be seen by reference to the annexed figure. A, the male screw; B the joints in the arms, G the female screw, E E the hooks. This screw-press is designed to hold and press down the cover of the box while it is nailed or fastened.

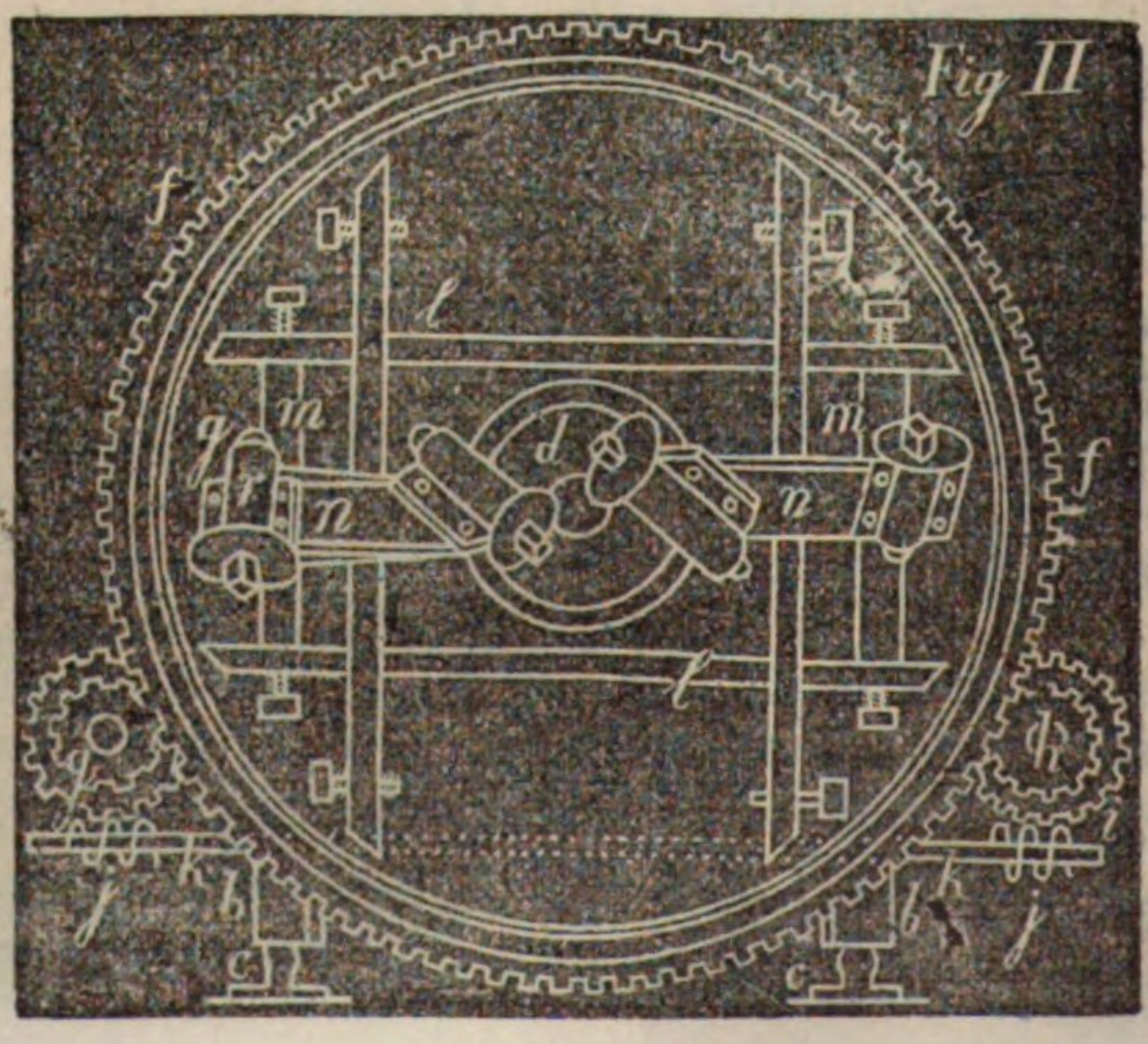
Claim.—Bending the upper portions of the arms or levers from a vertical position, and tending towards each other till they reach the cross-piece at B, and are jointed thereto at any point between the uprights and the centre of the yoke at G, to give them an inward tendency when the yoke is raised by the screw A.

No. 9,774.—EBENEZER TALBOT, of Windsor, Conn.—*Machine for Tunnelling, or Boring Rock.*—Patented June 7th, 1853.

The nature of this invention consists in so employing one or more metal rollets, or sets of rollets, with the periphery adapted to cut



away the surface of stone by rolling against it, that they shall describe in their action the segment of a circle, from the centre to the



circumference of the tunnel, in combination with a slow motion around the said centre of the tunnel, or other aperture, whilst at the same time that part of the machine which carries the rollets is capable of being advanced for the feed motion in the direction of the axis of the tunnel.

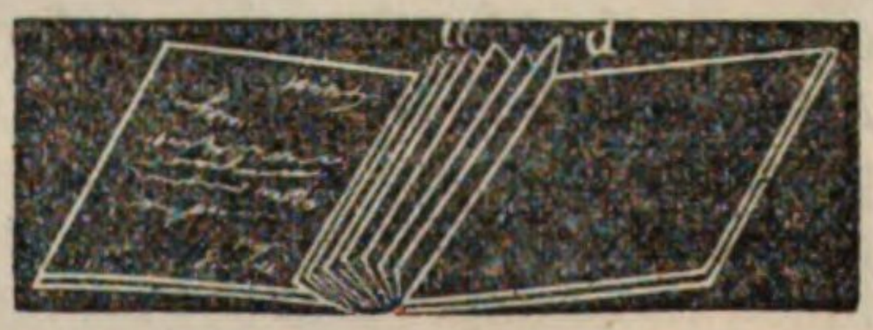
Claim.—The method of applying a rollet-cutter or cutters, for boring or excavating tunnels and other apertures in rocks, by causing the rollet-cutters to cut segments of circles from the centre to the periphery of the tunnel, with the concavity towards the machine, in combination with a motion or motions around the centre of the tunnel, to cause the cutters to act in succession on the entire surface to be cut away.

No. 9,775.—J. Hornig and Ludwig Suess, of Union Hill, N. J.—*Improvement in Artificial Stone.*—Patented June 7th, 1853.

The composition consists in silex seventy parts, clay eighteen parts, and twelve parts of common salt, or substances containing sodium or potassium in sufficient quantity to cement the silex and clay by means of heat together; when two parts of chalk are added, the composition receives a fine white color; ten parts of dross of copper give it a greenish color; fifteen parts of dross of iron give it a gray or black color. To give it a very remarkable degree of hardness, and a granite-like appearance, mix sixty parts of sand, fifteen of clay, ten of salt, and fifteen of quartz slate. The employment of powdered quartz instead of sand gives it a still greater hardness, especially when five parts of powdered glass are mixed with the rest of the composition.

Claim.—The above described mode of forming artificial stone, by the use of silex, alumina, and salt, or chloride of sodium.

No. 9,776.—Hamilton L. Smith, of Cleveland, Ohio.—*Improvement in Paper Files.*—Patented June 7th, 1853.

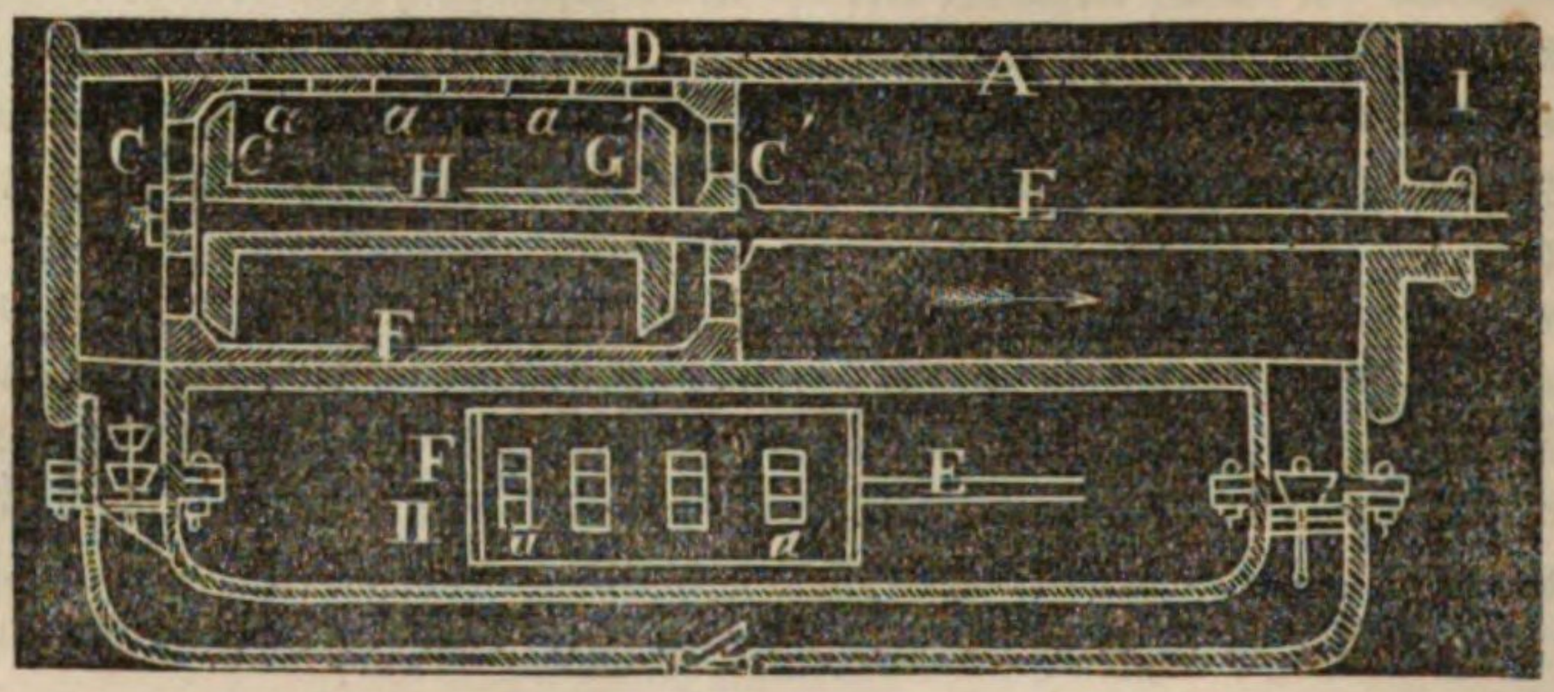


This improvement consists in a series of narrow leaves *a a*, which are bound together in the form of a book. The outer margins of the narrow leaves are coated on one side with a glutinous substance, by moistening which it will adhere to the margin of a letter or other paper applied to it. The narrow leaves may be numbered and an index added.

Claim.—The paper file herein described, with prepared adhesive leaves, or margins.

No. 9,777.—Levi P. and William F. Dodge, of Newburg, N. Y.—*Improvement in Pumps.*—Patented June 7th, 1853.

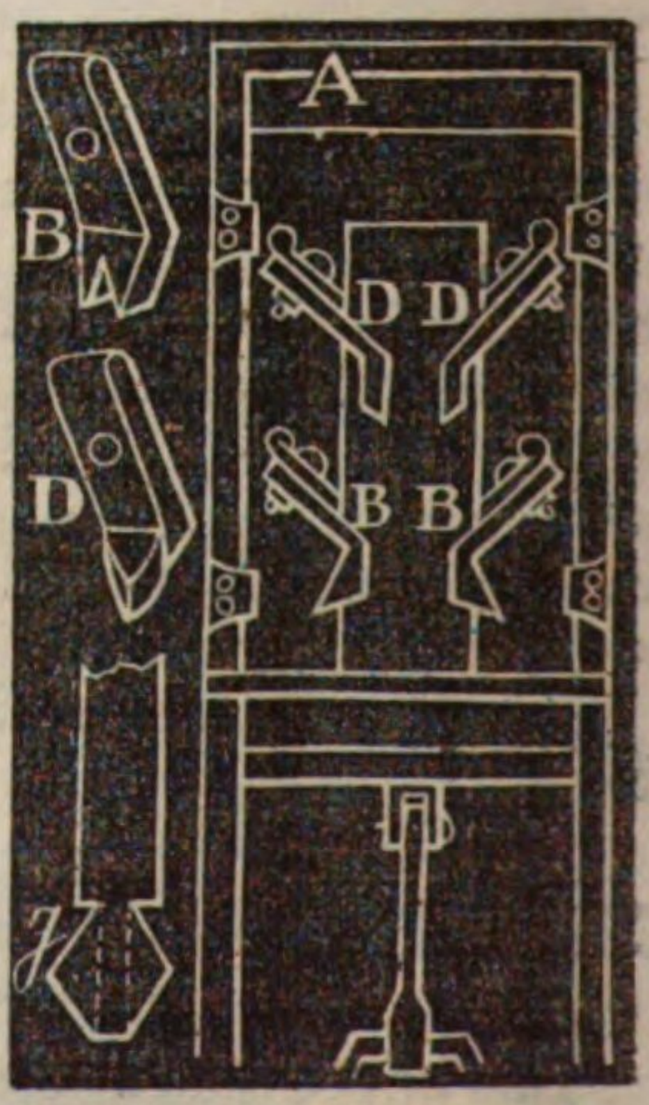
This improvement consists in connecting the valves G G′ of the piston heads, by a tube H encircling the rod E, whereby their simultaneous operation is insured, one closing at the precise time the other opens, while the piston heads are connected by a thin cylinder F, open on one side to communicate with the discharge pipe D. Fig. 1 represents



a section of the pump. On the upper side of the piston cylinder F, opposite the discharge aperture D, there is a series of passages *a a a* to let the water pass out freely from the interior of the piston. (See fig. 2.)

Claim.—The combination of the cylindrical piston, with its valves and passages, so that the water, all entering the cylinder upon pressure alternately at its ends, and being discharged under pressure through the openings at its side, tends to expand the same. Also, the combination of the piston heads without the cylinder with thin valves, and the induction and eduction passages, when these valves are united. The water entering through the piston heads, into the space between the same, and being discharged therefrom through a lateral eduction orifice.

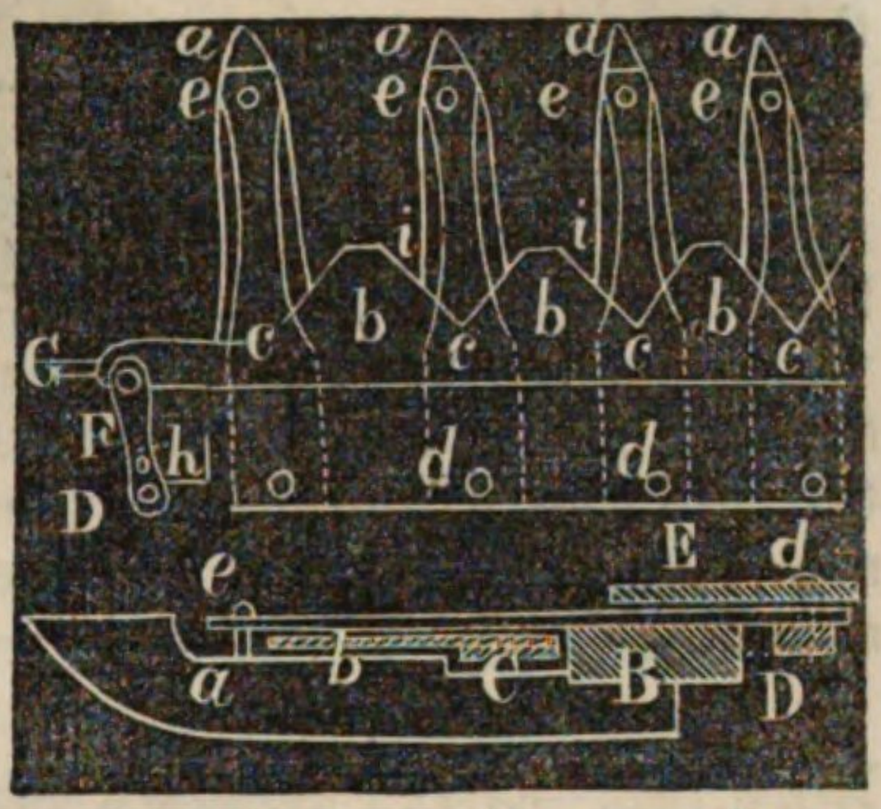
No. 9,778.— CHARLES B. FITCH, of Galena, Ill.—*Improvement in Cutting Apparatus for Tenoning Machines.*—Patented June 14th, 1853.



The object of this invention is to economize time and labor in tenoning, by making a wider cut practicable than heretofore. To the gate A are attached the improved cutting tools, in pairs, D D and B B; the foremost only partially performing the cut, while the after cutters finish the same. But the cutters differ in form according to the work to be performed; the lower or foremost cutting tools are V-shaped wing cutters, and are adjustable. In order to remove the angular strips *g*, formed by the cutters B B, the finishing tools D D shave off said strips and complete the formation of a regular tenon.

Claim.—The method herein described of cutting tenons, by means of the scoring V-shaped cutter, that cuts the square shoulder and point, and at the same time scores the side of the tenon, when this is combined with the lancet-shaped or other finishing cutter, for removing the material left by the scorers; arranged and combined as specified.

No. 9,779.—William G. Huyett, of Williamsburgh, Pa.—*Improvement in Harvesters of Grain and Grass.*—Patented June 14th, 1853.

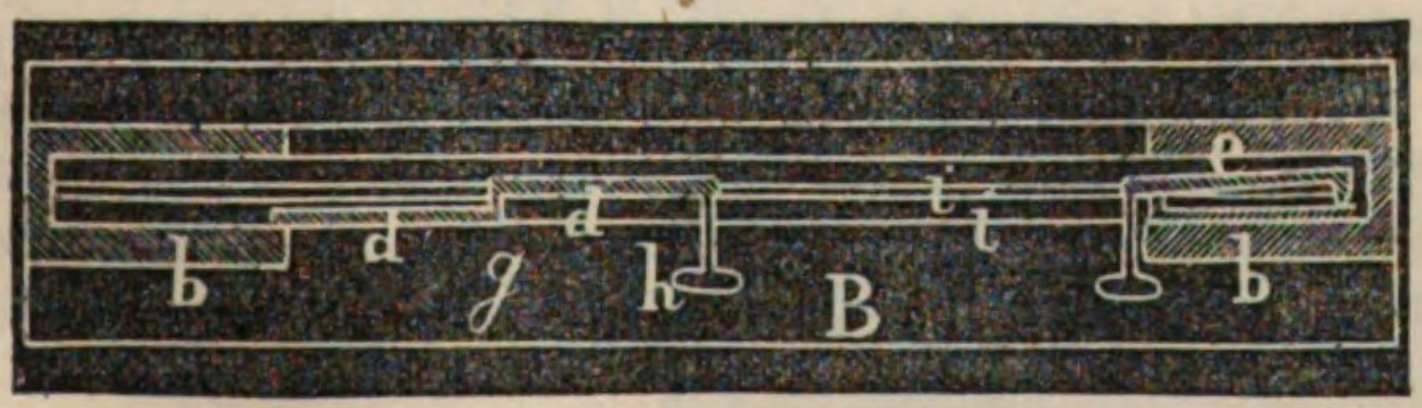


This improvement relates to the cutters. There are two sets of them, one above the other; the lower ones *b b*, as shown in the figure, are of the shape of saw-teeth, and have a reciprocating motion communicated to them in a direction crosswise of the machine, by means of connecting rods and cranks G. The upper set *c c c* work over the lower ones *b b;* and their outer ends are attached by pivots *e e e* to the outer ends of the teeth *a a a*. The upper set of knives are comparatively narrow, and of taper form, and are attached at their inner ends by pivots *d d* to a bar D having a reciprocating motion, which is also communicated to the upper knives by means of the piece F having its fulcrum at *h*. By this arrangement the knives operate with a "drawing cut," and the upper knives have the greatest length of vibration at their inner ends, and consequently prevent any choking or clogging of the knives, at the angles of the lower set of teeth at *i i i*.

Claim.—The peculiar manner of arranging the two sets of knives *b b b* and *c c c*, as above described, having an opposite reciprocating motion.

No. 9,780.—Sherman S. Jewett and Francis H. Root, of Buffalo, N. Y.—*Improvement in Stoves.*—Patented June 14th, 1853.

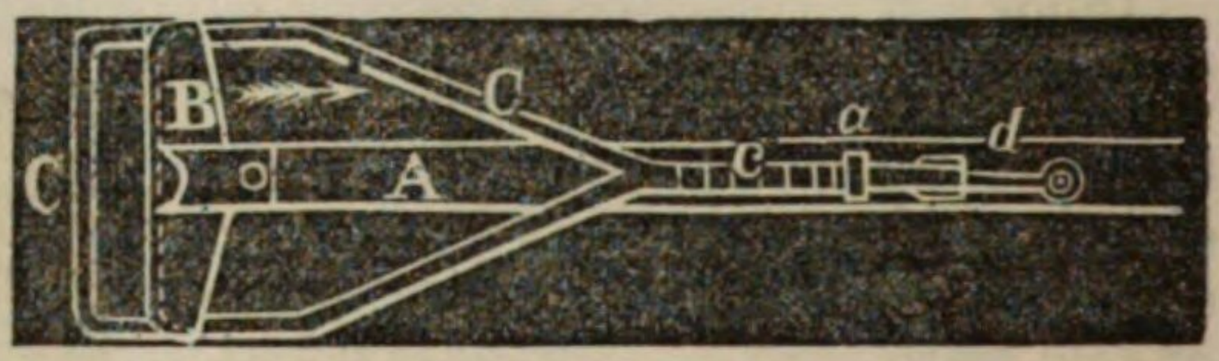
This improvement consists in constructing stoves or grates with recesses adjacent to their doors, of sufficient size to receive the doors, and open only when the doors enter.



In the figure, *b b* represent jambs, containing the recesses *c c* to conceal the doors. *d d* are the door-leaves, which slide in grooves *i i* in the bottom plate B. *g g* are the door flanges.

Claim.—The combination in a stove or grate of the fireplace or furnace with a sliding-door or doors, to close the front of the fireplace; and a recess in one or both of the jambs, for the doors to slide into, and be concealed from view, and be insulated from the fire and smoke within. The recess of sufficient size only to receive the door or doors, and open only when the door enters.

No. 9,781.—Harvey Murch, of Lebanon, N. H.—*Improvement in Mop-Heads.*—Patented June 14th, 1853.



The claim will explain this invention, by reference to the annexed figure.

Claim.—The improved mop-head composed of the fixed cross-head B, which has grooves in its lower side and end, in combination with the sliding binder C, that terminates in a notched shank *c*, and passes through the loop *a*, on the handle A, which serves as a detent in consequence of the action of the spring *d*, on the under side of the shank.

No. 9,782.—Geo. Frederick Muntz, Jun., of Birmingham, England.—*Improvement in the Manufacture of Metal Tubes.*—Patented June 14th, 1853.

This invention consists in casting short tubes of a peculiar form or section, rolling them flat to extend them in length, and then opening them out and rendering them cylindrical. Figure 1 represents the short tube; the inside is washed with lime and water containing as much salt as will be held in solution, which prevents the tube from adhering together when rolled flat. The tube is heated to a red heat, and rolled between grooved rollers similar to those used in rolling flat bar iron, but grooved to produce round edges as shown in figure 2. The tube thus rolled into flat bars is to have one end opened for about six inches, as shown in figure 3; and when in this form, and at red heat, it is to be passed through between grooved rollers shown at figure 4. The tube is then entered on to the end of the mandrel, and on to the stem, so that the tube will be thereby opened in its whole length. At figure 5 the form of the mandrel is shown.

Muntz's metal, which is used for these tubes, consists of 60 parts of best copper, and 38 parts of good zinc.

Claim.—The above described mode or process of manufacturing a metallic tube of Muntz's metal, or other like metal, or compositions of metal.

No. 9,783.—Lea Pusey, of Patterson, Penn.—*Improvement in self-waiting Dining Tables.*—Patented June 14th, 1853.

This table is constructed with an endless band, situated beneath the table and kept in constant motion during meals, by any power applied through cranks or other means. Upon the top of the guiding carriers (which are firmly attached, and are supported by small railway trucks which move in guiding apertures in the top of the table) are placed waiters, whereon the dishes are put, and constantly conveyed around

before the guests on both sides of the table. Also, placing a shelf over the central portion of the table.

Claim.—The inventor's claim is substantially embraced in the foregoing description.

No. 9,784.—Fergus Purden, of Baltimore, Md.—*Improvement in Mortising Machines.*—Patented June 14th, 1853.

The nature of this improvement consists in making the bed-piece in two parts, so that it may be adjusted to mortises in different positions and of various widths, to allow the chips to escape from the under side of the piece to be mortised.

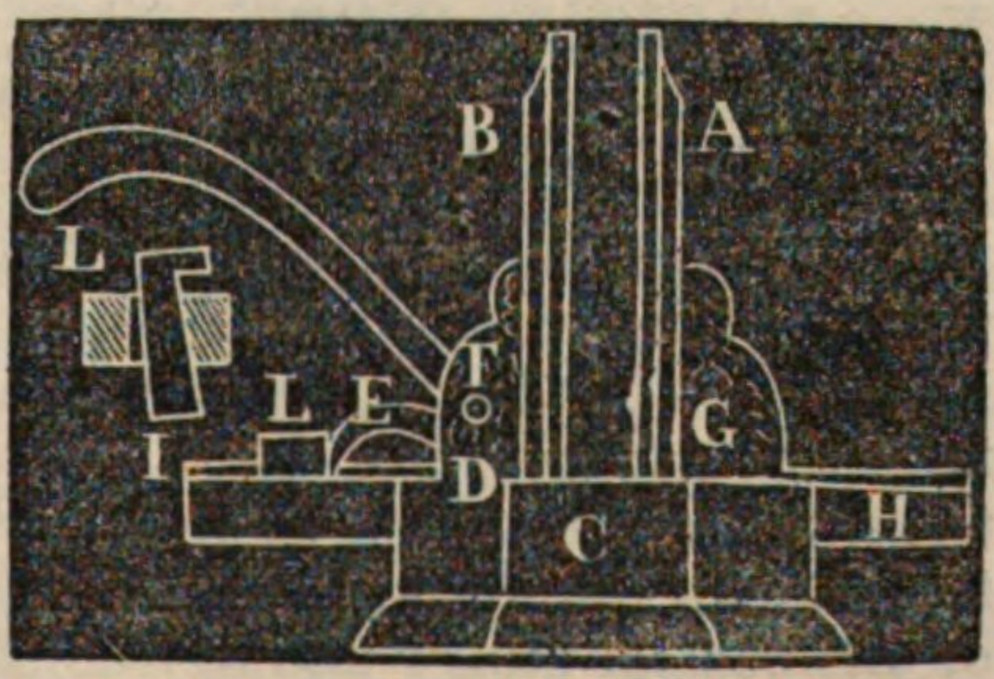
Claim.—A divided bed, so constructed that it can be adjusted to suit the width of the mortise to be cut, so as to prevent the side of the mortise from being splintered by the cutter or chips, when they are forced through and driven out on the under side.

No. 9,785.—Alex. Hypolite Sampson, of New Orleans, La.—*Improvement in Brick Machines.*—Patented June 14th, 1853.

The nature of this improvement consists in combining the mould wheel, pressing apparatus, the carrying chains with suitable projections thereon, which furnish from a reservoir or box, and carry forward to the delivery followers, the boards or platforms upon which the pressed brick are received and carried forward to any convenient point for arranging them in the drying-house or kiln; some portions of the apparatus having a continuous, and others a reciprocating intermittent motion, but the whole being so timed as to operate with perfect uniformity with each other.

Claim.—The box or reservoir of platforms with the carrying chains, or their equivalents, provided with suitable projections for catching, drawing forward, and carrying immediately underneath the delivery follower, the boards or platforms for receiving the pressed brick, and by which they are conveyed out of the machine.

No. 9,786.—E. H. Smith, of New York, N. Y.—*Improvement in Copying Presses.*—Patented June 14th, 1853.



The platens A and B are set vertically. The hand lever has its fulcrum at F, and works between the upright supports D, to which the stationary platen is attached. To the lever is attached a pawl E, to give the progressive motion; H is the transverse bar to which the upright standard G is attached, and the movable platen A. The adjustable stop L in the separate figure is set upon one end of the transverse bar, and is to be secured in any position by the wedge I, whereby the press can be worked exactly, and at any distance required.

Claim.—The employment of the hand lever to operate the pressing

platen through the agency or by the means of the sliding transverse bar, or its equivalent, in combination with the adjustable stop or its equivalent.

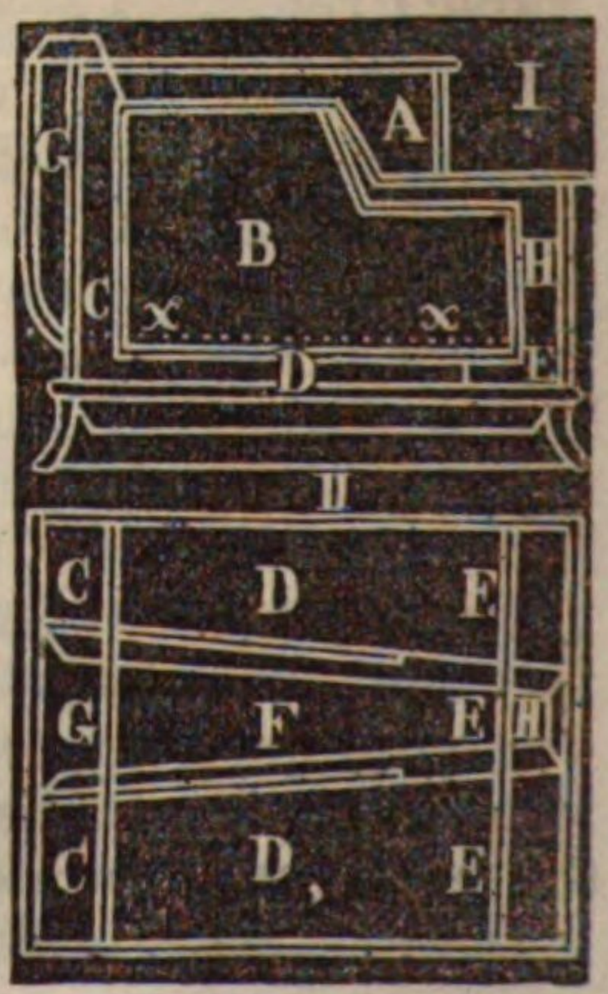
Also, the arrangements of the plates or platens A and B in such relation to their support and operating medium, as to render three of the four edges of each platen unobstructed, perfectly available, and easy of access.

No. 9,787.—JOHN I. STURGIS, of New York, N. Y.—*Improvement in Type-Casting Machines.*—Patented June 14th, 1853.

The nature of this invention consists in arranging upon a horizontal rock-shaft working in adjustable boxes in standards at each side of the bed plate of the machine, the mould-block rest in a horizontal position, having one edge inclining downwards, so as to give the mould a downward slant to drop the type, and having its back end in a vertical rock shaft, having a pin in it to work in a groove of a cam on the main shaft, for the purpose of producing a reciprocating motion to carry the mould-board to and from the nipple of the metal bath. Also in the combination of the levers and cam and spring movements, for holding the matrix, and "levering" it (technically) when in operation for moulding type. Also in the mode of setting the upper half of the mould-block, by means of a V-shaped bar secured to a back piece, which is made adjustable by means of set screws, holding in the joint at the back of the mould-block. And lastly, in the arrangement of the several parts of the machine, for the purpose of type casting.

Claim.—The use of the horizontal mould-block rest, in combination with the vertical and horizontal rock-shafts and cam. Also, the use of the lever and rod in combination with the horizontal mould-block rest and matrix. Also, the use of the matrix-holder, having a slot in it, to allow of a lifting motion on its centre pin, and a notch in its back side for the end of the spring to act against, in combination with a spring and inclined plane or cam, on the horizontal rock shaft, and a pin for holding it. Also, the V-shaped bar secured to an adjustable end plate, attached to the outer end of the lower half of the mould-block.

No. 9,788.—GILES F. FILLEY, of St. Louis, Mo.—*Improvement in Cooking Stoves.*—Patented June 14th, 1853.

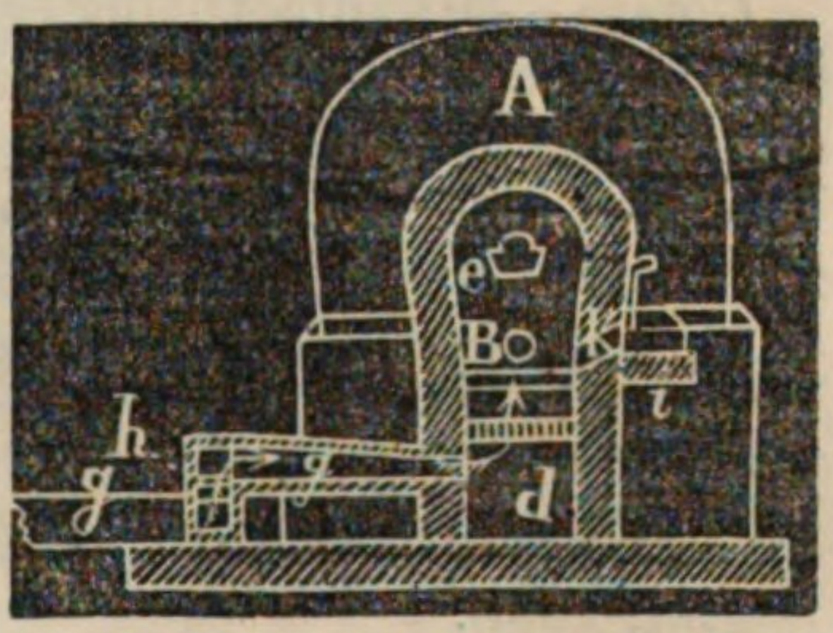


The claim, by reference to the figure, will fully explain this improvement.

Claim.—The flaring enlargement of the side flues D D, C C, from the space above the oven to the flue space E, which extends under the entire front end of the oven; and also the enlargement of the central flues F and G, from the flue space E to the upper end of G, for the purpose of increasing the draught of all the flues, and causing a larger portion of heat to be conducted into the flue space E. Also, in combination with the

flaring shape of the flues C C F and G, the auxiliary dumb flue H, which rises from the flue space E to the hearthplate, and thence is continued immediately under the fire chamber and up the back of the same; by which another portion of heat from the fire chamber is conducted by radiation and circulation into the flue space E, for the purpose of aiding in giving an increased draught to the stove, and in raising the temperature of the front end of the oven bottom to the required degree for baking purposes.

No. 9,789.—JAMES M. BROOKFIELD and EPHRAIM V. WHITE, of Honesdale, Pa.—*Improvement in Manufacturing Glass.*—Patented June 14th, 1853.



The nature of this invention consists in combining and using a blast with the ordinary furnace, and anthracite coal as a fuel, for melting the materials in the manufacture of glass. The common furnace is used, having the ordinary arched chamber A for containing the melting pots, working holes, &c., sieges, heating chambers B, air chambers *d*, doors *e*, &c.; and to permit the use of anthracite coal, in addition to the ordinary bellows, a blast apparatus is applied, and the blast is conducted through the pipe *g*. The strength of the blast is regulated by the sliding valves *h*. The shelves *i* are for heating the coal, and the apertures *k* for introducing it into the heating chambers B.

Claim.—The application of a blast, and anthracite coal as a fuel, in the manufacture of glass.

No. 9,790.—JOHN L. KINGSLEY, of New York, N. Y.—*Improvement in Moulding Gutta-Percha Stereotype-Plates.*—Patented June 14th, 1853.

The nature of this invention consists in making moulds for stereotyping of India rubber or gutta-percha, by mixing the gums with metallic or earthy substances, and by expelling all air from the mould while it is being filled, to render the cast in all respects perfect. (The process would require too lengthy a description for this Report.)

Claim.—The process of expelling air from the surface of the type when forming the mould, and from the surface of the mould when forming the plate. Also, the method of dressing, levelling, or thicknessing the moulds and plates, when made of any compounds that run, so that all the plates made shall be invariably of the same thickness.

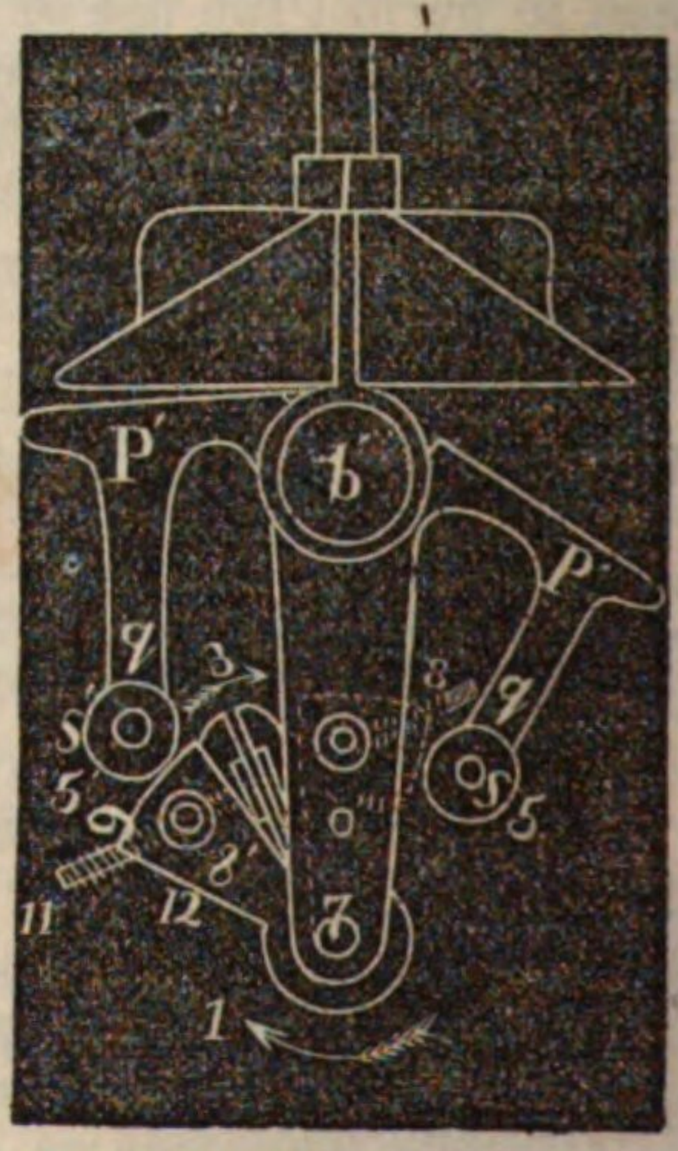
No. 9,791.—J. J. GREENOUGH, of Boston, Mass.—*Improvement in the Manufacture of Glass Plates.*—Patented June 14th, 1853.

This improvement consists in the apparatus and process of forming plates of glass, by causing the melted material to pass between two or more pairs of rollers, while in a plastic state, and in keeping the plates

between the rollers, and supported by them, till cool enough to support themselves straight without stretching while annealing, or by suspending them by their upper edges in an annealing chamber during the process of cooling; both of which processes may be used in conjunction. The apparatus consists of a carriage composed of two side pieces, properly connected and placed on trucks; this carriage supports two or more pairs of rollers, arranged so as gradually to reduce the thickness (if desired) of the glass, as it passes between them. The hopper or reservoir containing the melted glass is located above, and so arranged as to precipitate the melted glass directly between the rollers, by turning the frame upon which the hopper is suspended or swung.

Claim.—Manufacturing plates of glass, by causing the glass while in a plastic state to pass between two or more pairs of rollers. Also, embossing the surface of the plate-glass by passing it between embossing rollers. Also, suspending plates of glass by their upper edges after they have been formed while annealing, so as to keep them in a perfect plane, without resting on a bed.

No. 9,792.—Horatio Allen and D. G. Wells, of New York, N. Y. —*Improvement in Cut-off for Steam Engines.*—Patented June 21st, 1853.



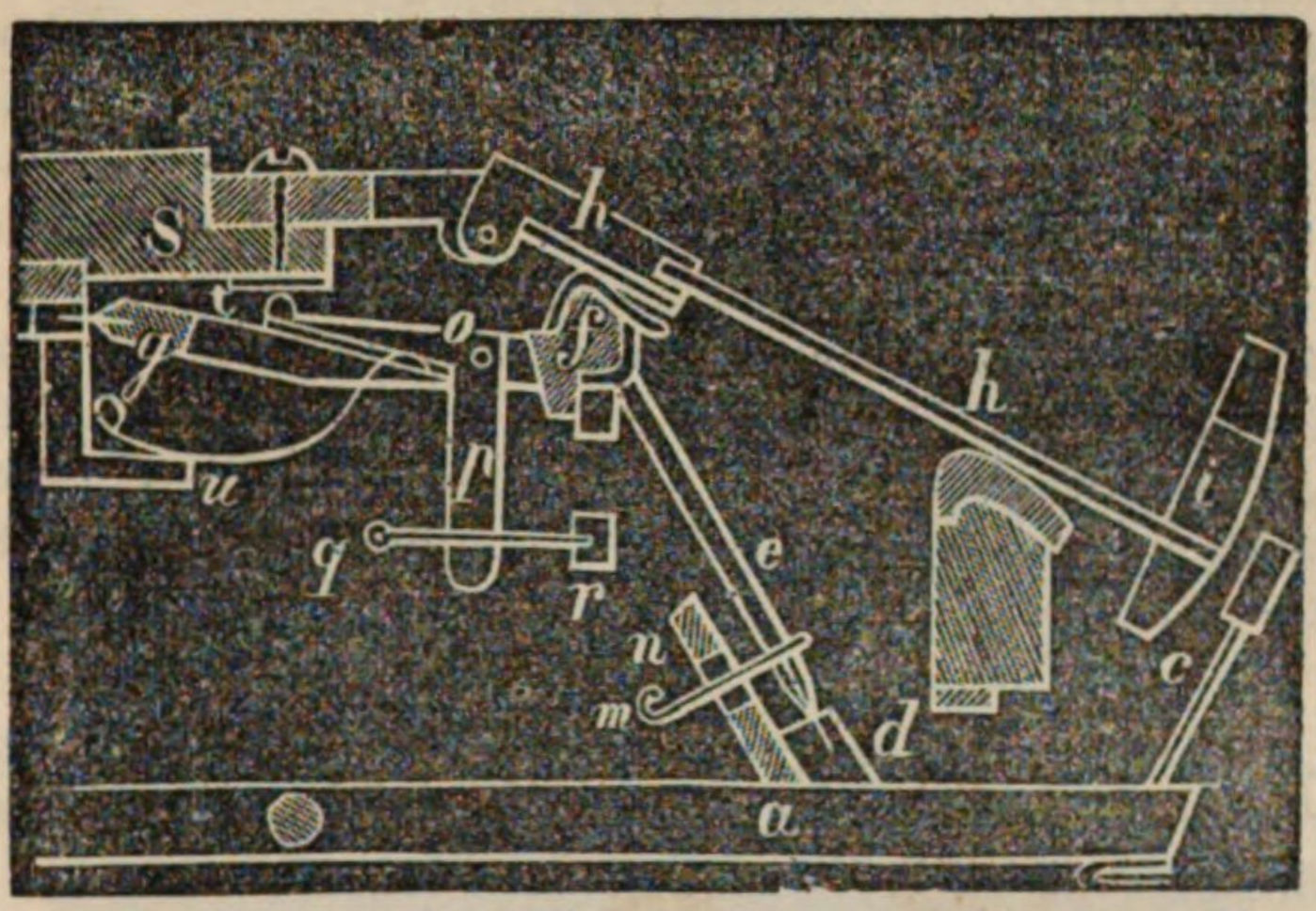
In this improvement in the cut-off, the exhaust valve toes are permanently attached to the rock-shaft; and on this shaft are placed the loose toes, or secondary toes, by means of which the steam valves are operated: motion is given to raise the loose toes by means of an arm permanently attached to the rock shaft, and to lower them by means of an arm having its centre on an arm attached to the rock shaft, and deriving its motion from any part of the engine whose motion commences with or slightly precedes the motion of the piston rod. *b* is the rock shaft; P P are loose toes; 8 8′ are two sectors, supported by the pin 7, but free to turn on it. These sectors are connected with the arm 9 by means of a right and left hand screw.

Claim.—The mode of operating the loose toes by means of sectors, combined with the rock shaft, and operated as set forth.

No. 9,793.—Benjamin E. Colley, of Cambridge, Mass.—*Improvement in Piano-Fortes.*—Patented June 21st, 1853.

This improvement consists in making the fly of the jack adjustable by a set screw, which keeps it in its proper position with regard to the shoulder of the hammer arm, and prevents its rebounding against the same; at the same time the fly of the jack is prevented from blocking by being pushed from the lever which operates the hammer-

arm, at each blow; *a* represents the key-lever; *c*, back-catch; *d*, jack; *e*, fly; *f*, arm which works on a fulcrum at *g*.



In the arm *f*, and turning on a fulcrum *o* in the same, is placed the right angular lever *p*, through the bottom end of which is inserted a screw *q*, with washers at *r*. The other end or projection *t* of this lever bears against the stationary piece s. When the arm *f* is raised by the fly of the jack, the lever *p*, turning on the fulcrum, will press by means of its screw *q*, and washer *r*, against the fly of the jack, and throw it from the shoulder of the arm *f*; thus effectually preventing its sticking or blocking. The lever *p*, of right angular form, is aided by the bent spring *u*.

Claim.—Throwing the fly of the jack from the arm which operates the hammer each time the note is struck, so as to prevent its blocking in the arm, by the bent lever *p*, and set screw *q*, operating independently of the hammer and hammer arm in the manner set forth.

No. 9,794.—William H. Danforth, of Salem, Mass.—*Improvement in Power Printing Presses.* Patented June 21st, 1853.

The nature of this invention consists in the employment of two parallel type forms, and two platens, in one printing machine, so arranged one above the other that both platens can be operated together, so that a sheet of paper can be printed by each form at one impression. Also, in the manner of feeding the paper into the machine between a series of griping bars and bands, that hold it in place to receive the impression, and pass it forward afterwards; while the inking roller is so arranged as to follow closely after it, across the face of the types, to ink them, and be followed in turn by the blank sheet that is to receive the next impression. Also, in the manner of providing an opening between the feed bands, at the time that the sheets are entered from the tympan. Also, in the arrangement for operating the feed bands, so that they will be stationary at the time that the impressions are given.

Claim.—The employment in one printing-press of two parallel type-forms, one above the other, and two platens so arranged in a

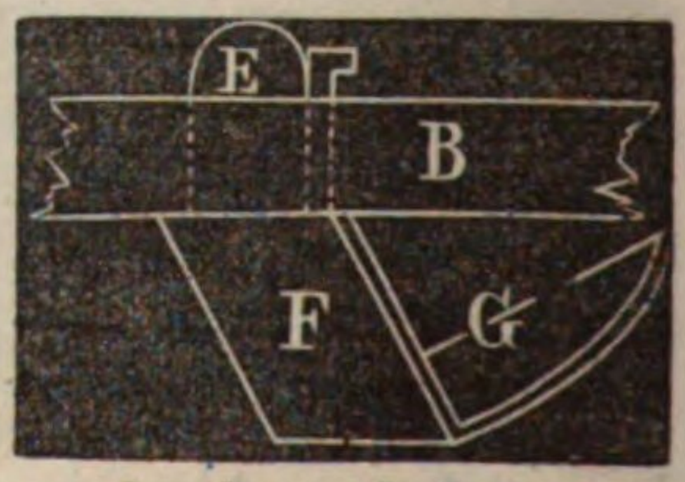
frame as that a sheet of paper can be printed by each form at one impression. Also, the mode of feeding the paper. Also, making the feed-bands unequal in thickness, for the purpose described. Also, the employment of a series of griping or discharging cross-bars, in combination with and so arranged upon two endless bands, as to be made to act upon the leading edges of the sheets as they pass along, and hold them against the feed-bands, until they have passed across over the top of the pile upon the platform, for the purpose of piling the printed sheets. Also, the device for giving and checking the motion of the feed-bands, alternately as required; consisting of the vibrating lever, bar, reciprocating-rack, connecting-wheel, feeding-wheel, fast-wheel or disc, spring-pawl, adjustable cam, pin, studs, arm, rock-shaft, brake, cylinder, &c.

No. 9,795.—JOHN A. ELDER, of Westbrook, Me.—*Improvement in Looms for weaving Checked and Figured Fabrics.*—Patented June 21st, 1853.

The main feature of this improvement consists in placing one half of the trap-boards directly above the other half, their position being such as to allow the knot-cords to pass from their point of suspension, through holes in the two trap-boards, placed at short distances apart.

Claim.—The arrangement of two trap-boards, placed one above the other, and between the suspension board and needles. Also, two trap-boards, arranged, the one above the other, with their slots in opposite directions to the knot-cord holes, when combined with the knot-cords, having a knot for each board, and a single set of needles, for the purpose of vibrating the knot-cords from the slots in one board to the slots in the other; the whole arranged and combined in the manner herein set forth.

No. 9,796.—EDMOND L. FREEMAN, of Ann Arbor, Mich.—*Improvement in Bog-Cutting Cultivators.*—Patented June 21st, 1853.



The teeth are constructed in the form represented in the figure. B represents the beam, E the shank, F the coulter part of the tooth, and G the blade of the tooth. The teeth are set in triangular frames.

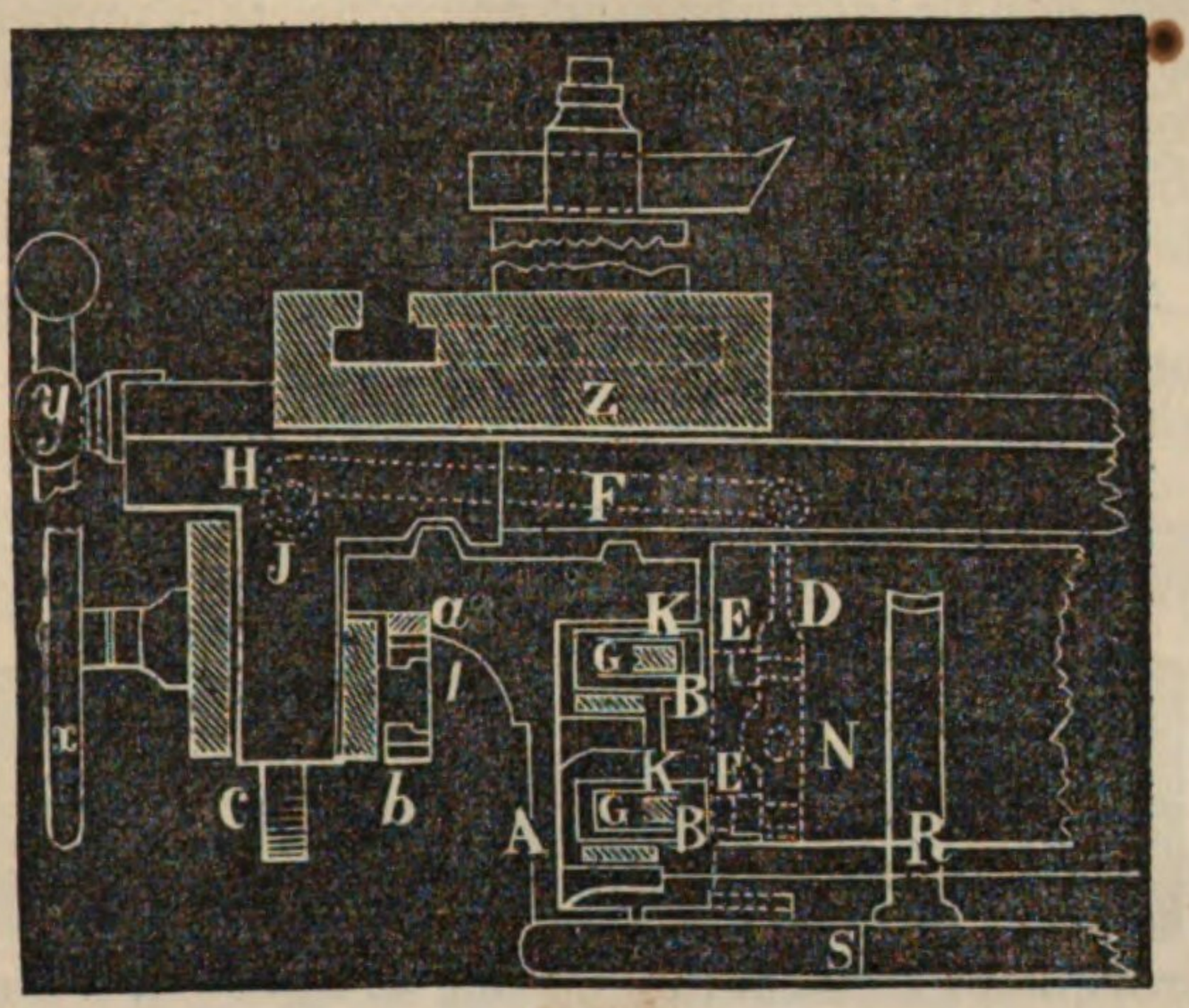
Claim.—The precise construction of the tooth, and placed in the position as set forth, the vertical part and the horizontal each having a backward slant.

No. 9,797.—FREDERICK W. HOWE, of Windsor, Vt.—*Improvement in Machines for planing Metals.*—Patented June 21st, 1853.

A represents the bed or rail frame, which supports the tool carriage C; B B are friction boxes connected to the tool carriage; D is a lever shown in dotted lines K; the endless chain, which moves continually in one direction through the boxes B B.

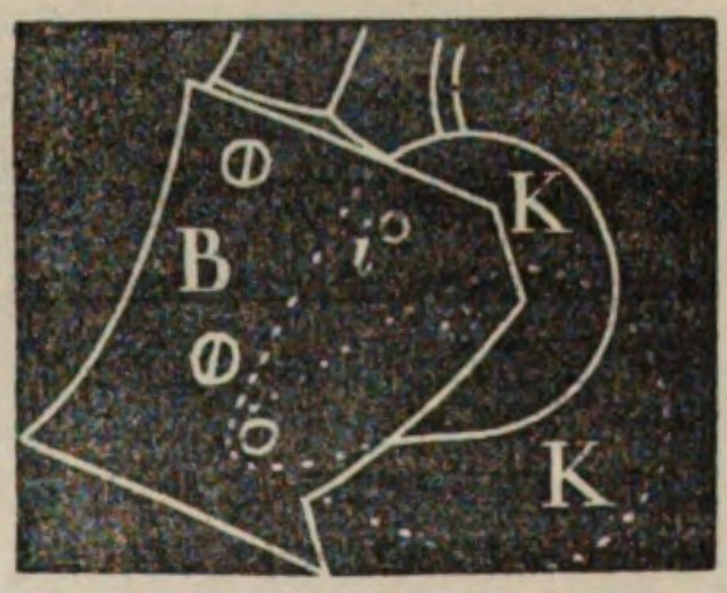
Claim.—Combining with the endless chain and the primary tool carriage the two slide boxes B B (or their mechanical equivalents), the

binders G G and rocker lever D, and its operative mechanism, viz., the rod F, eccentric H, shaft J, and lever I; the whole being made to operate



substantially in manner as described, and for the purpose of enabling a person to readily produce a movement of the tool carriage either to the right or left, while the endless chain has a continuous motion in one direction.

No. 9,798.—William S. Hyde, of Townsend, Ohio.—*Improvement in Cultivator Ploughs.*—Patented June 21st, 1853.



This cultivator is constructed of three shares, and secured to a triangular adjustable frame. The middle share, which is placed behind the side shares, is of the shovel variety. The side shares B B are of the plough variety, and are inclined, to throw the soil in opposite directions from the centre of the machine; each of the side shares has an adjustable wing K which is pivoted to the mould board, and can be turned up or down, as seen in dotted lines K. *i* is a bolt.

Claim.—The cultivator herein described with adjustable supplementary wings, so constructed as to cultivate the soil near the roots of the plants superficially, and deeper at a distance therefrom, the wings being adjustable to any required angle with the bottom of the furrow, so as to give any desired degree of inclination to the sides of the ridges or hills, and to change their inclination from time to time to adapt them to the varying stages of the growth of the plant.

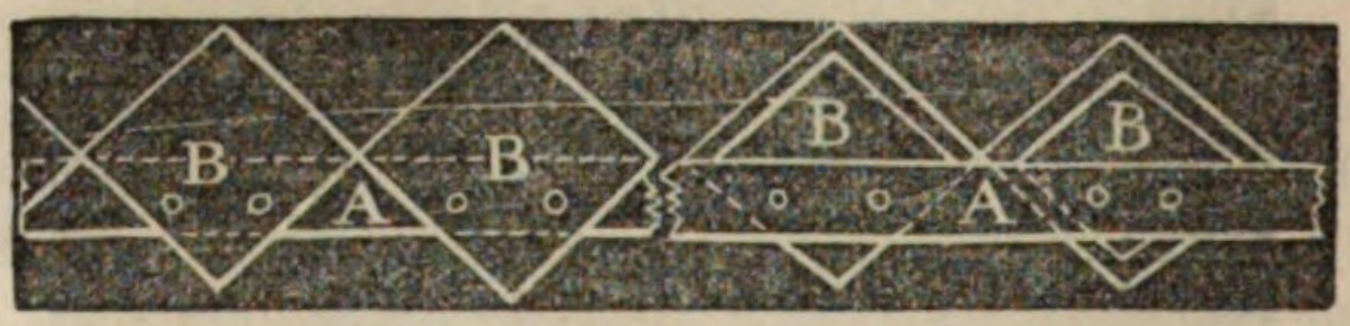
No. 9,799.—Simon Ingersoll, of New York, N. Y.—*Improvement in Feed Motion in Plug-Cutting Machines.*—Patented June 21st, 1853.

This invention consists in the employment of a feed motion which

is constructed and operated so as to move the board or slab from which the plug or bung is cut, at intervals between the longitudinal motions of the cutter spindle, after cutting one plug to a proper distance to cut another one, and which has certain provisions made for forcing the feed dogs into the work, and withdrawing them therefrom, preparatory to the feeding and retrograde movements, for the prevention of injury to their edges and to the face of the work.

Claim.—The above description substantially sets forth the claim of the inventor.

No. 9,800.—John H. Many, of Waddam's Grove, Ill.—*Improvement in Cutters to Harvesters.*—Patented June 21st, 1853.



This improvement consists in a strong straight bar A and a series of lozenge-shaped blades B B secured thereto by screws, or otherwise. The blades should be four inches long and one-eighth of an inch thick, with their edges sharpened by bevelling them off in the manner of a joiner's chisel.

Claim.—A cutter or sickle composed of a series of lozenge-shaped blades attached to a bar; whereby the pressure of the grass at the front corners of the blades is so counteracted, that the latter are not bent down from the edges of the guard fingers against which they cut.

No. 9,801.—D. H. B. Newcomb, of Conewango, N. Y.—*Improvement in Hill-side Ploughs.*—Patented June 21st, 1853.

This invention consists in arranging, centrally between the mould-boards, a running wheel, which raises from the bottom of the furrow the share which for the time being happens to be behind, and thus prevents the dragging of the same, and obviates all friction from that cause, and also facilitates the draught, and prevents the wear from the same cause.

Claim.—Arranging the two shares of a double plough which alternately run forward on a central wheel, in such manner that the share in the rear shall be carried above the bottom of the furrow. Also, the method of relieving the swivel, and of steadying and supporting the beam when set and in turning, by means of semi-circular guide or track, in connexion with a catch at each end of the track to hold the beam in place when properly adjusted.

No. 9,802.—Augustus R. Pope, of Somerville, Mass.—*Improvement in Electro-Magnetic Alarms.*—Patented June 21st, 1853.

The nature of this invention consists in applying to either doors or windows of a house a magnetic alarm, for the purpose of giving alarm in case of burglarious or other attempts to enter the same through doors and windows. By opening the door or window the

spring of the key which is attached thereto is forced against the other wire, which forms a circuit, whereby the magnet becomes charged and draws the armature towards it, thereby throwing the hammer of the bell, and giving alarm.

Claim.—The combination of the movable and vibrating armature and the spring circuit-breaker with the hammer of the bell, the same to be used in connexion with the electro-magnet wires, and a key applied to the door or window.

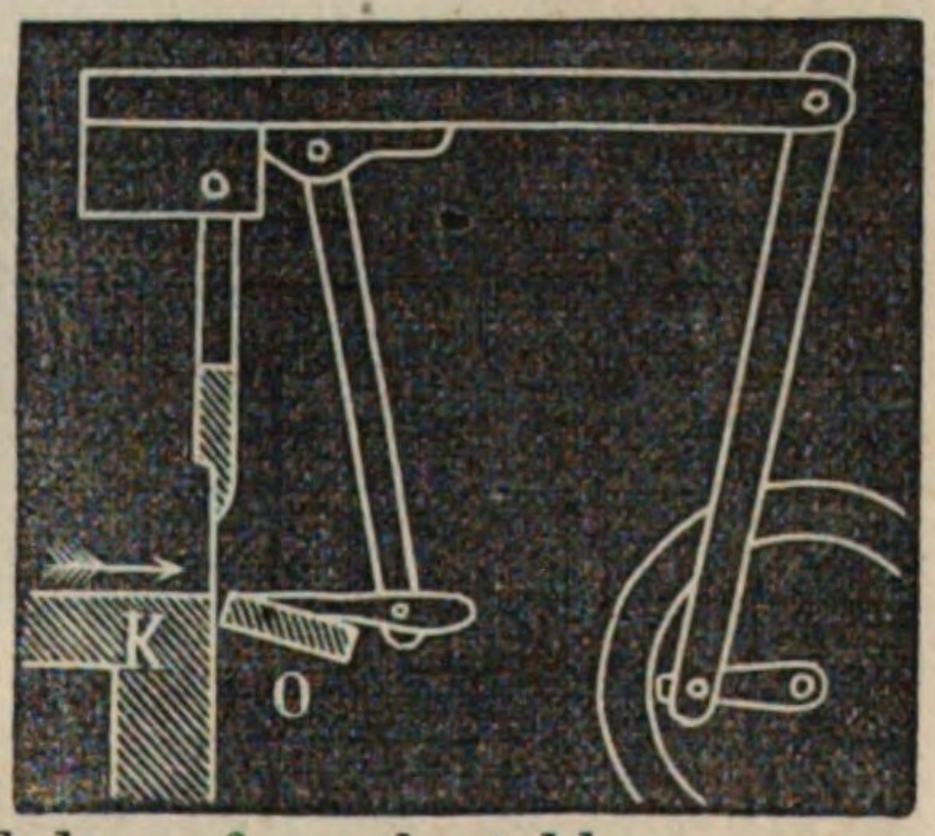
No. 9,803.—GEORGE ROHR, of Charlestown, Va.—*Improvement in Seed-planters.*—Patented June 21st, 1853.

This invention consists in a device attached to a seed-planter, for the purpose of sowing grain, or scattering it from an apron and screen.

Claim.—The use and application of a ridged, or fluted, or corrugated vibrating apron device, combined with the "grain scatterer" with crank-handle axis actuated by the pins or cogs, on the hub-flange of the propelling wheel, together with the reacting spring rest; the whole arranged and used together as a seed fountain, with apertures so constructed as to admit of connecting thereto short detachable or movable mouth-pieces or outlet spouts, for the more perfect and free escape of the seed from the grain chamber on to the apron and scatterer.

No. 9,804.—J. R. SHANK, of Buffalo, Va.—*Improvement in Lath Machines.*—Patented June 21st, 1853.

The nature of this invention consists in providing the machine with a gauge o, which is furnished with a vibratory motion, answering the double purpose of regulating the thickness of the lath, and slipping it from the knife and table K, in order to be sure of its separation from the board, so that it can be shoved up at every stroke of the machine and thereby cut a lath perfect. While the knife is descending the gauge is descending, whereby the lath is forced down from the table.

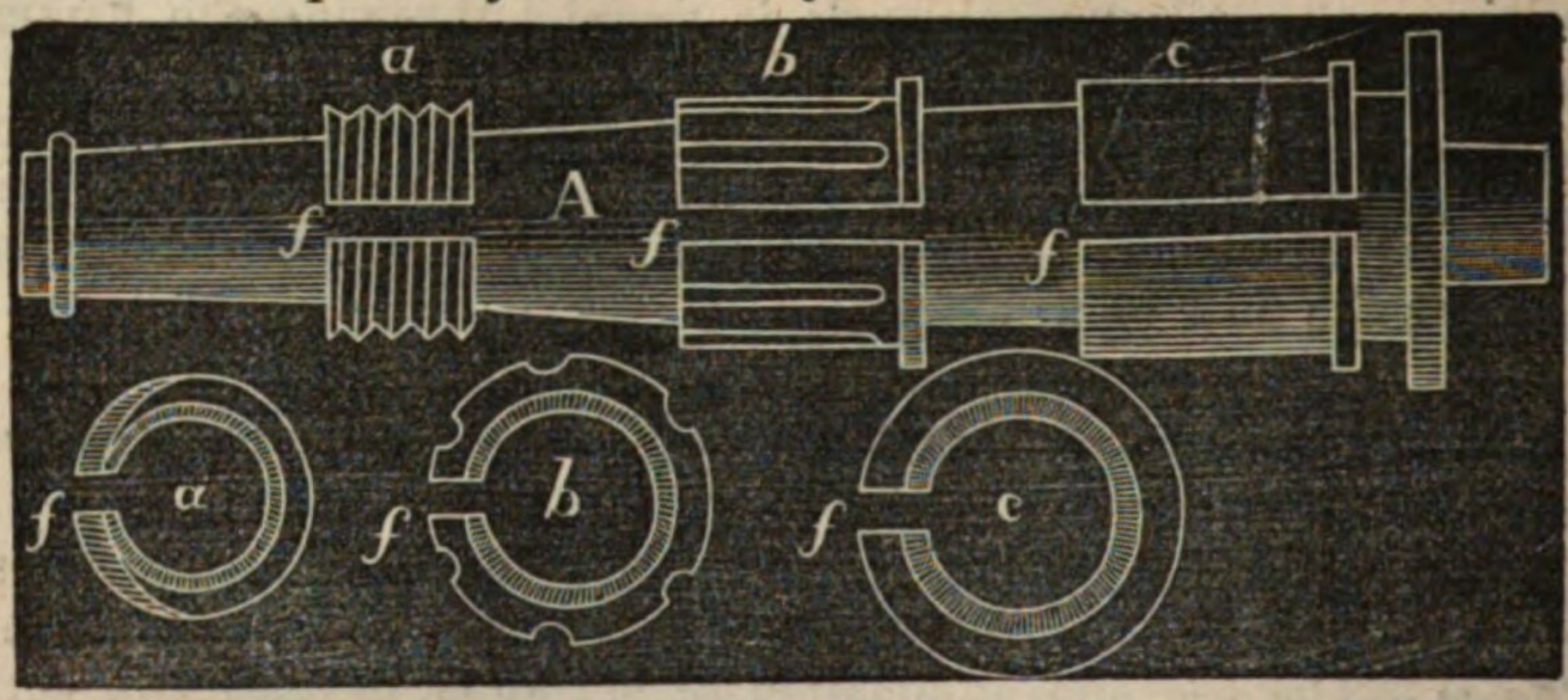


Claim.—Imparting a vibratory motion to the gauge-bar, in the manner described, so that it will not only perform the function of a gauge-bar to regulate the thickness of the lath, but also that of a slipper in order to insure the separation of the lath from the block, for the purposes described.

No. 9,805.—WALTER SHERROD, of Providence, R. I.—*Improvement in Expanding Mandrels for Turning Machinery.*—Patented June 21st, 1853.

The nature of this invention consists in the use of an arbor A having a taper turned thereon, on which is fitted an expanding

cylindrical spring shell *a b c*, open at *f* longitudinally with the arbor, and held in its place by its elasticity.



Claim.—A divided spring shell constructed as described, and so that when it is combined with a tapering mandrel it shall retain its position on said mandrel; the whole arranged, constructed, and combined in the manner set forth.

No. 9,806.—William McKay Thornton, of Bloomsburgh, Pa.—*Improvement in Horse-collars.*—Patented June 21st, 1853.

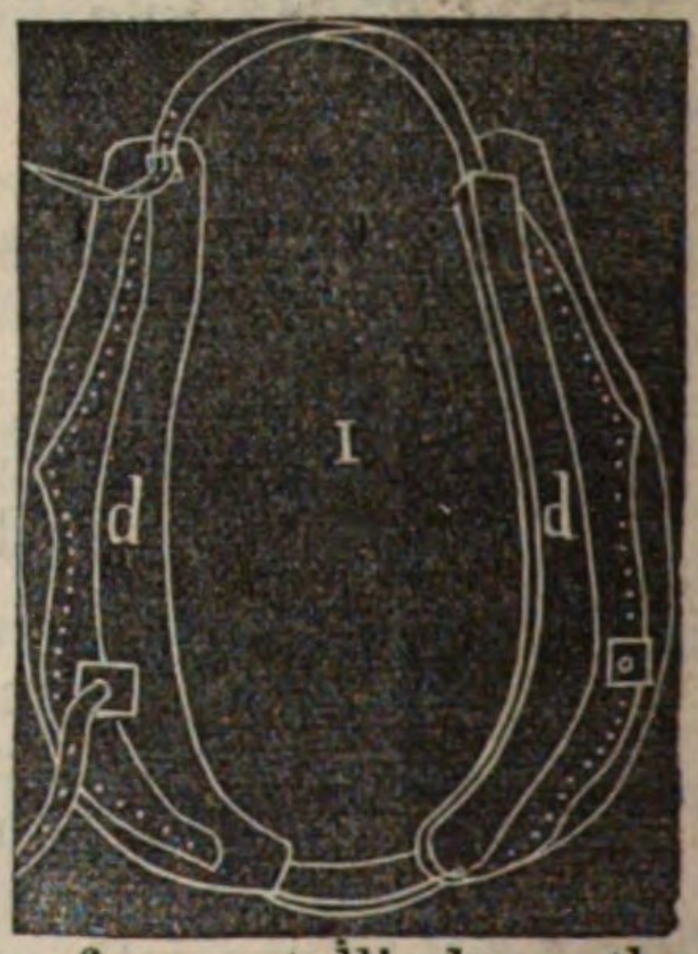
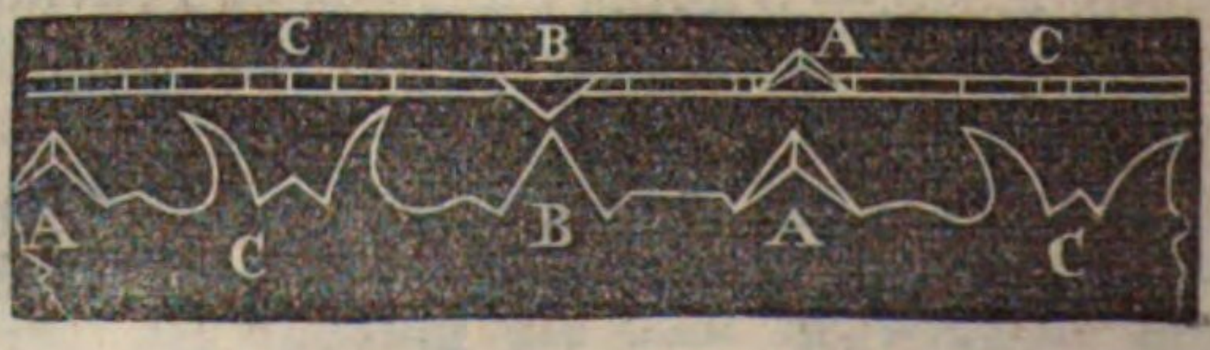


Figure 1 represents this improved collar, with wide pad-flaps *d*, which are stiffened by means of a metallic bow, as shown in figure 2.

Claim.—A horse-collar formed with pad-flaps *d* by the extension of the face leather of the pads as described. Also the manner of stiffening and uniting the pads by means of a metallic bow, the ends of which are rigid to stiffen the shoulder pads and support the tugs, while its arch is flat, thin, and flexible in one direction, to allow the pads to change their relative distances apart, comparatively rigid in the other direction, to prevent the pads from turning, with respect to a plane parallel to the front of the collar.

No. 9,807.—Joseph H. Tuttle, of Seneca, N. Y.—*Improvement in Saws.*—Patented June 21st, 1853.

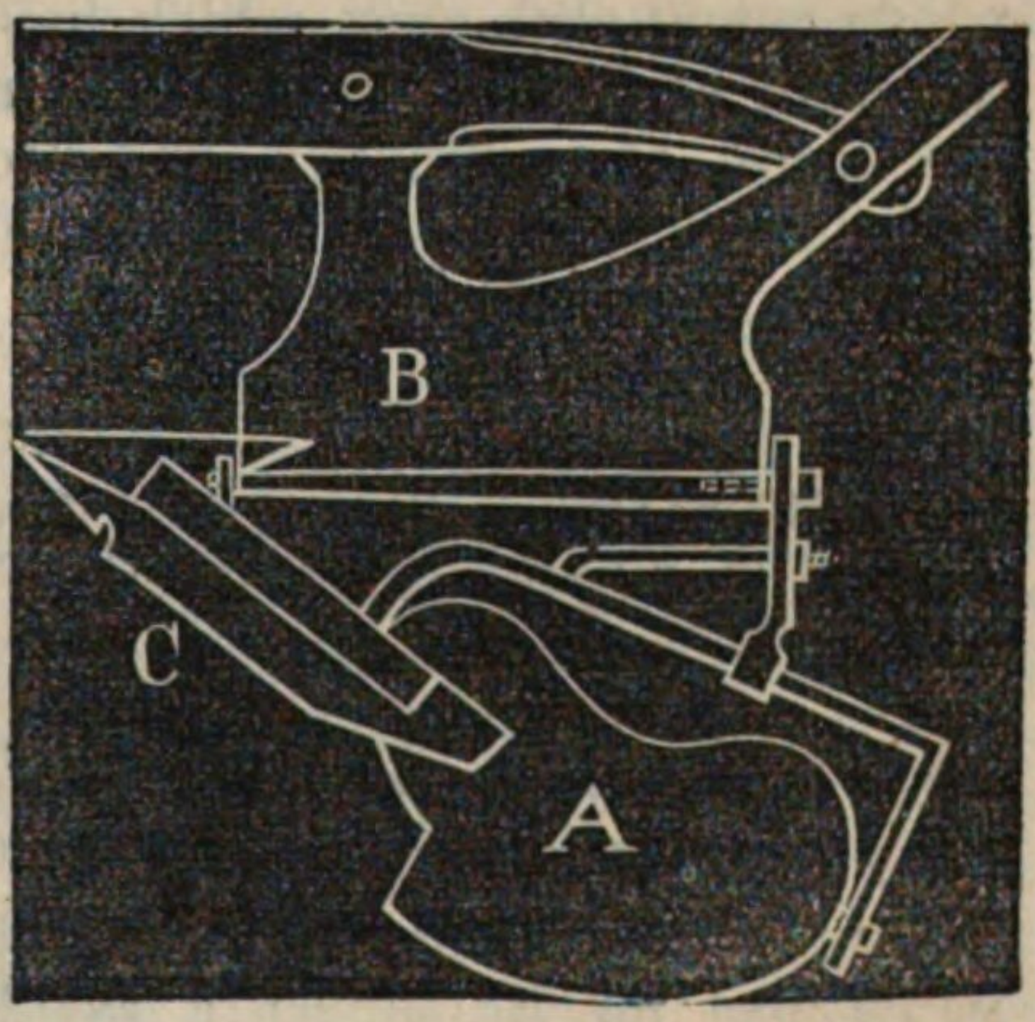


The nature of this invention consists in so forming and arranging the teeth on a saw blade, as that the set of teeth which scores the

sides of the kerf shall project slightly beyond the other set of teeth which planes out the wood between the scores, and so also that a portion of the planing teeth shall by their form and location act as a gauge, both to the fleam cutters or scorers and to themselves, to prevent the teeth from taking too rank a hold on the wood, which makes it run with great ease and efficiency. A A and B B represent the fleam or knife-edged teeth, and c c the curved planing teeth.

Claim.—The combination, arrangement, and location upon the same blade of the sets of fleam teeth for scoring the sides of the kerf, and the sets of planing teeth for removing the wood between the scores, when the planing teeth are placed back to back, curve in opposite directions, and are between the sets of fleam cutters, and at sufficient distances apart, so that each planing tooth shall serve alternately as a gauge to its fellow, while allowing it to cut to a proper depth, and be a permanent guide to the fleam cutters, to prevent any of the teeth from taking too rank a hold upon the wood, which makes it run with great ease and efficiency, and is applicable to slitting or cross-cutting.

No. 9,808.—Jonas B. Wilder, of Belfast, Me.—*Improvement in Ploughs.*—Patented June 21st, 1853.



The nature of this invention consists in having a revolving mould-board, so arranged and attached to the share and land-side plate, that the mould-board may be turned independently of the share, which also revolves. Both the mould-board and share may be turned to either side of the land side plate, so that the dirt or sod may be cast or turned in either direction; and the object in having the mould-board so arranged that it may have an independent movement, is, that it may be adjusted properly to either side of the plough, and the plough work equally well, no matter on which side of the plough the share and mould board are placed. The figure represents the side-hill plough, the share c and mould board A being down, or in the act of being turned over on the other side of the land side B.

Claim.—Having the mould-board so constructed, arranged, and attached to the share c and land side plate B, that the mould-board may be turned independently of the share, and a proper curved outer face be presented to the sod on either side of the plough; the mould-board being constructed with two faces precisely of the same form.

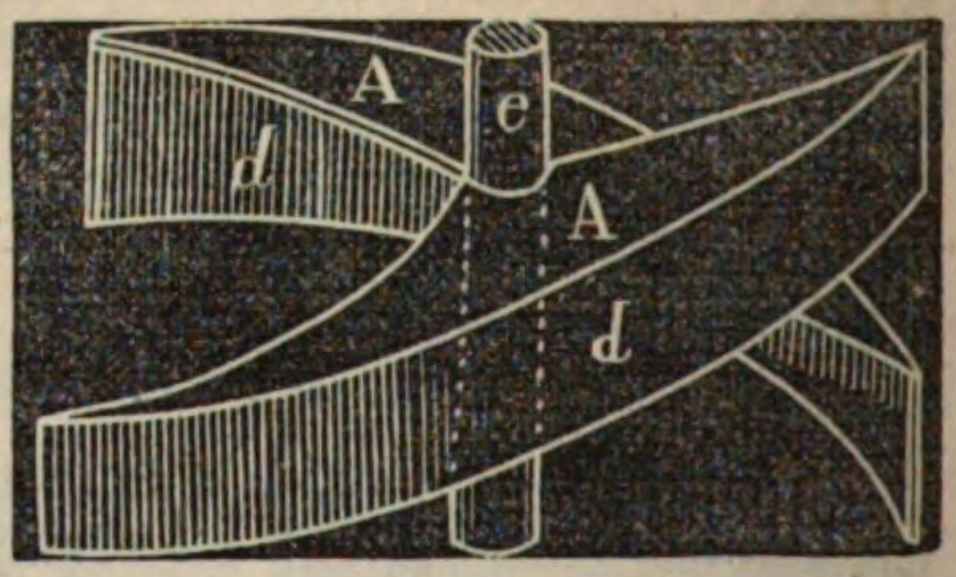
No. 9,809.—Benj. R. Norton, of Syracuse, N. Y.—*Improvement in Metallic-Pointed Pens.*—Patented June 21st, 1853.

To construct these pens metallic moulds are first prepared, either in halves, or as most convenient, the inside of which is of the shape

and size of the pen to be made, having on one end a cylinder and piston, for forcing the composition of gums when in a plastic state into the moulds. The pens are made of gutta percha or other elastic gums, and pointed with metallic points, the nibs of which are tipped with iridium, as in the ordinary manner of making gold pens.

Claim.—A metallic-pointed pen, attached to a wire of the length required to form a handle, when such pen and holder are covered from the top of the holder to near the nib of the pen by a coating of gutta percha or India rubber, of suitable thickness.

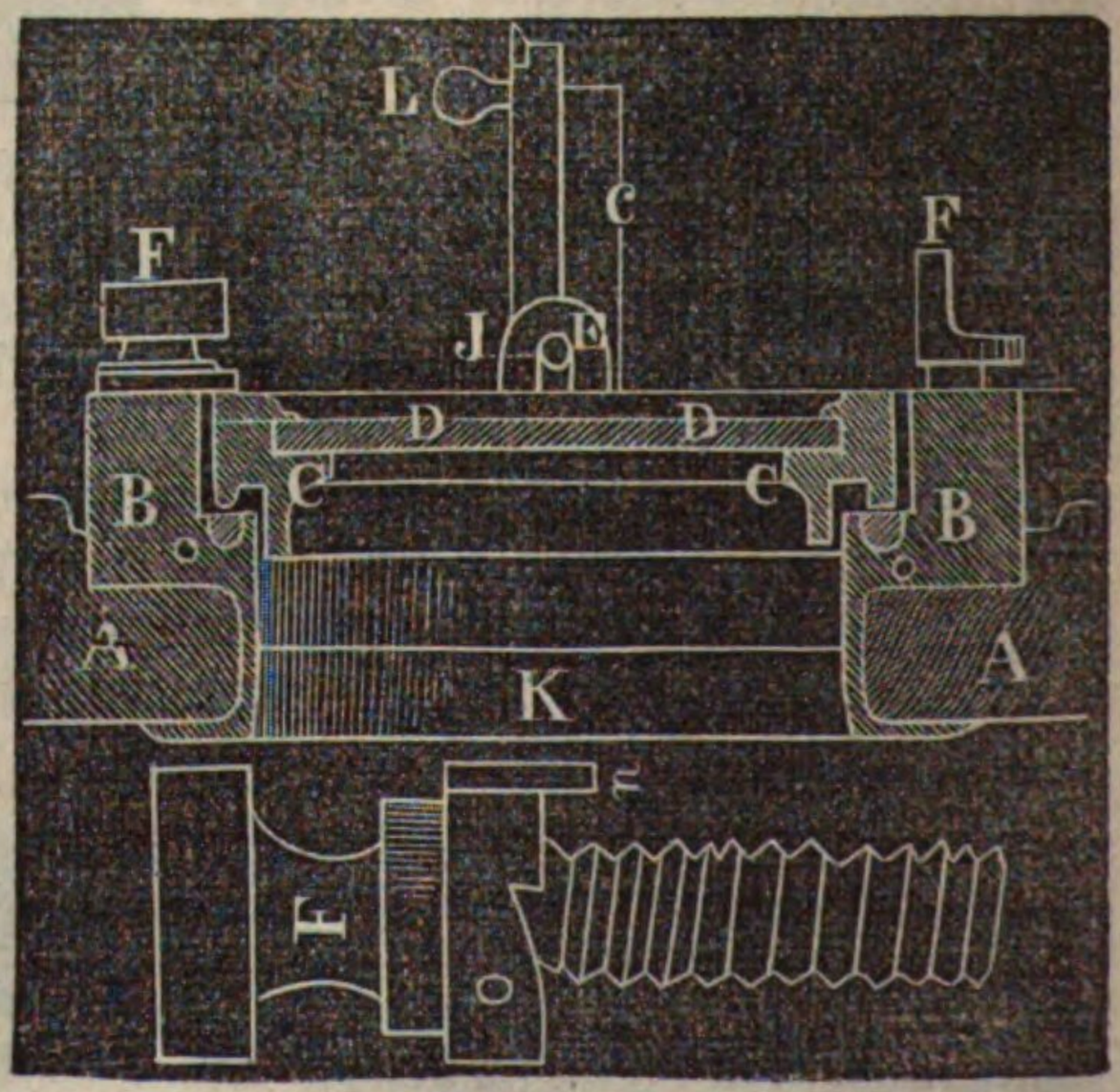
No. 9,810.—William T. Tyson, of Orwigsburg, Pa.—*Improvement in Propellers for Canal Navigation.*—Patented June 21st, 1853. Antedated December 21st, 1852.



This propeller consists of inclined blades, which are secured to a hub; the peripheries of the blades are everywhere equidistant from the axis on which the propeller turns, and are furnished throughout their whole extent with rims, which have the form of helical strips cut from the barrel of a cylinder, and project backwards from the blade, to confine the water on which the latter is acting, and thus prevent it from being thrown outwards by the centrifugal force generated by the revolution of the blades. A A are the propeller blades in the figure, *d d* the rims, *e* the axis.

Claim.—The blades constructed with lips or rims, which are sections of a cylinder concentric with the axis on which the propeller rotates.

No. 9,811.—Enoch Hidden, of New York, N. Y.—*Improvement in Side-lights for Ships.*—Patented June 21st, 1853.



This improvement in ship lights has for its object a more convenient ventilation. The figure represents a section, and A a portion of the ship's side. B B, the main frame of the light, rendered tight by a lead ring K K. C C, movable frame in which the glass D is fastened and turned on its pivots J in the projecting pieces E, cast on the frame B. L shows the frame C in an upright position when open. F F are the screws with combined inclined planes, which firmly screw the light frame or glass cell to its India rubber seat o o, making

it air and water tight. The screw F is shown separate, fig. o being the circular inclined plane; N is a projecting pin for stopping the screw in its proper position when the light is to be opened for ventilation.

Claim.—The arrangement of screws F tapped into the main frame B, in combination with inclined planes or spirals o, forming part of the screws that holds the light frame, or cell containing the glass, fast to the India rubber in its grooved seat in the main frame, with its stop pin N for stopping the screw in its proper position when the light is opened for ventilation. Also, the projecting ears E, with slots or chase-mortises, in which the pivots of the light frame or cell turn, allowing the light to be hauled from its seat, and consequently out of contact with the India rubber, so as to allow the plane of the light to be placed at any angle to the main frame, thus freely admitting of ventilation. Also, the arrangement of a lead or other ductile metallic ring soldered on to the main brass frame of the light, so that it can be turned round the other edge of the opening in the vessel securing any suitable material, completely making the main frame of the light water-tight to the vessel.

No. 9,812.—R. L. HAWES, of Worcester, Mass.—*Improvement in Envelope Folding Machines.*—Patented June 21st, 1853.

This invention consists in the self-feeding machine, which takes a sheet of paper and carries it forward to impress or form a base, and thus retains it until it is carried onward to the finisher, whence it is discharged a finished or folded and pasted envelope, the paste being applied in its progress through the machine.

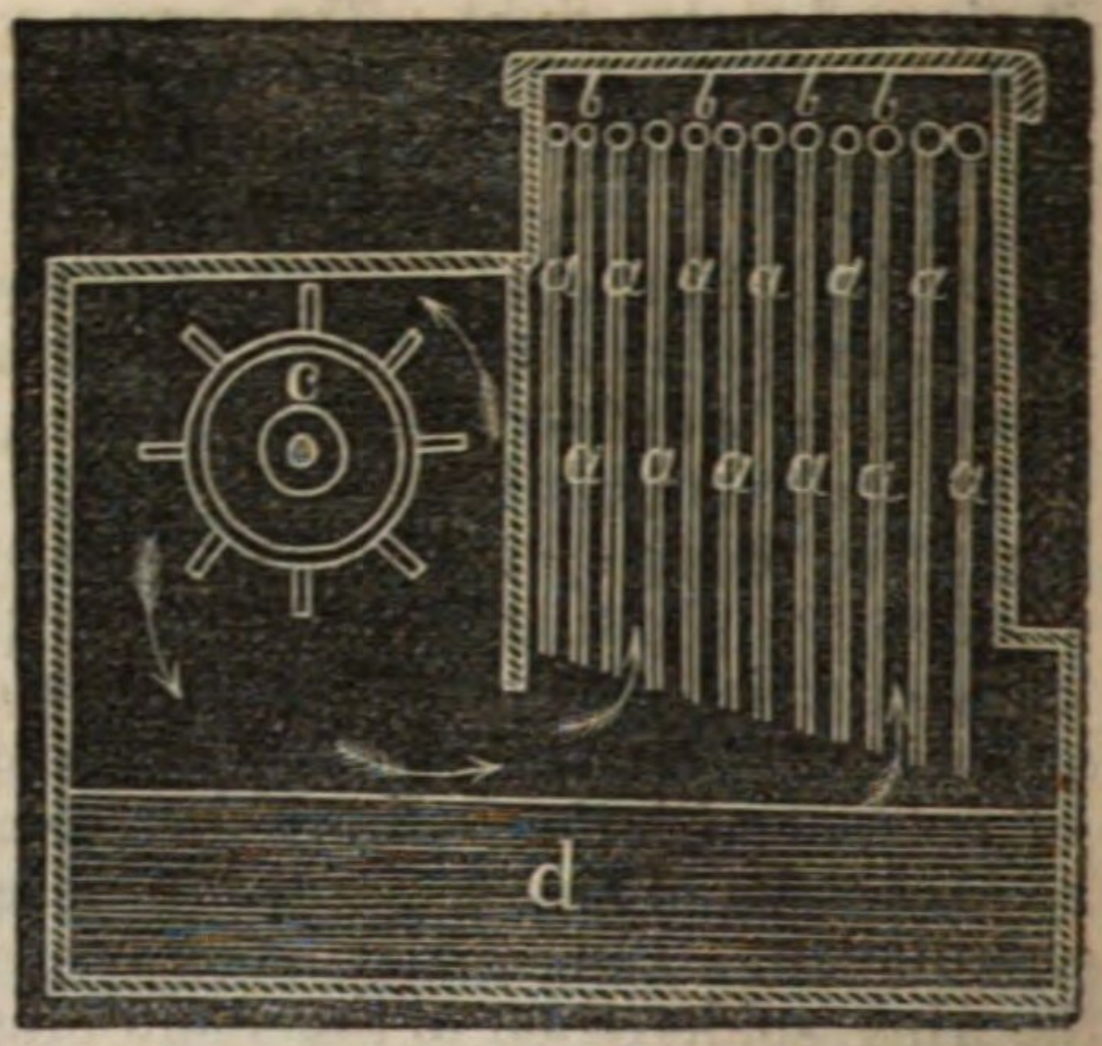
Claim.—The combination of the self-adjusting feed table *d* with the paste fountains, so arranged that they will descend and press a freshly pasted surface of their rollers upon the top sheet, and raise it to permit the table *b* to pass beneath and take away a sheet at every second revolution of the main shaft. Also the combination of the platform with the hooks and the retaining fingers. Also the combination of the platform with the follower and weight. Also the finishing folder, consisting of knives with their adjustable springs and guides, in combination with the finishing plunger to press the envelope and cause the three flaps to adhere together. Also the arrangement for raising the table, in combination with the fingers for discharging the finished envelope.

No. 9,813.—BARNABAS H. BARTOL, of Philadelphia, Pa.—*Improvement in Refrigerators for Cooling Liquids.*—Patented June 28th, 1853.

This invention consists in an improved apparatus for cooling water used for the condensation of vapor from vacuum pans, especially applicable in places where water is scarce. The apparatus consists of a room twelve feet square, and nearly as high, filled with a series of vertical board partitions *a a a a*. The surface of the boards is corrugated or rough; between the boards is a space of two inches; over every

board is a pipe *b b b b*, with small holes from which the water falls upon the board. In front of the chamber is a fan blower c, inclosed in a shell, driving the air into the cistern, whence it passes up between the boards.

Claim.—The arrangement of a series of partitions and interstices, for cooling water.



No. 9,814.—Horatio Clarke, of Dedham, Mass.—*Improvement in Bobbins.*—Patented June 28th, 1853.

In this improvement the bobbin head is composed of a wooden disc, cemented or glued firmly to a disc of raw hide or other flexible material of durable quality. This raw hide protection may be fixed on the inner or outer side of the bobbin head. This additional disc of hide protects the bobbin head from breaking, and resists wear and tear.

Claim.—Making the bobbin head as described, of wood and raw hide, or other material having like qualities, for the purpose of durability, &c.

No. 9,815.—Christopher Duckworth, of Thompsonville, Conn.—*Improvement in Shuttle-box Motion in Looms.*—Patented June 28th, 1853.

This improvement consists in the manner of operating the shuttle boxes, by means of levers, friction rollers, notched slides, &c., so that the shuttle boxes may receive a lateral, vertical, and diagonal motion at pleasure, and may also be kept in any one position as long as is required for any figure, or character of the fabric, being governed by the card pattern.

Claim.—The method of giving a three-fold movement (lateral, vertical, and diagonal) to the shuttle boxes, by which any required shuttle may be operated at any given pick. Also the apparatus for operating the shuttle boxes, consisting of the case (with its friction rollers and slides), combined with the levers which work the slides, and the principal lever which moves the shuttle boxes; when the whole is constructed, arranged, and combined as described.

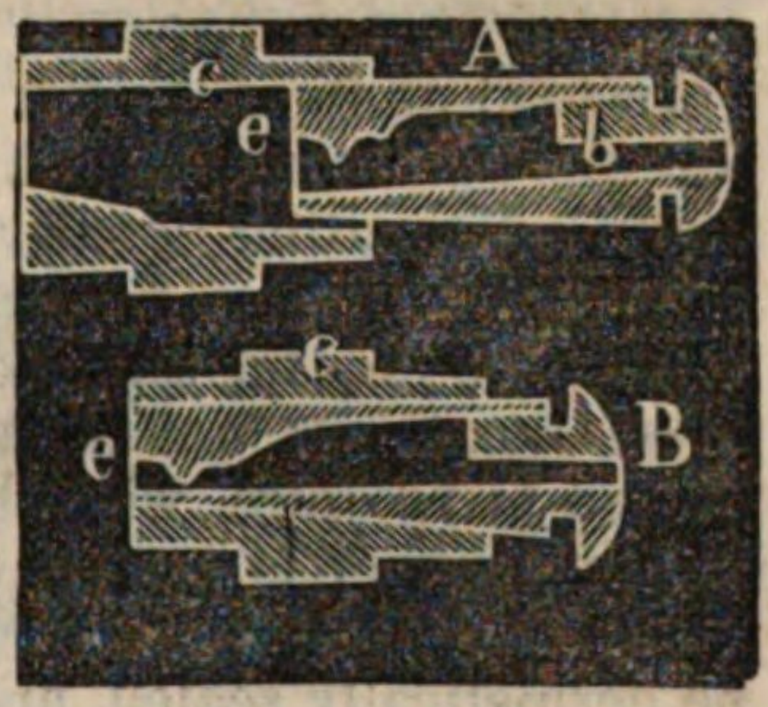
No. 9,816.—Horatio N. Goodman, of New Haven, Conn.—*Improvement in Melodeons.*—Patented June 28th, 1853.

This improvement consists in constructing the melodeon with two sets of reeds and two sets of valves, in such a manner as to be played with two sets of keys. The arrangement is such that each set of keys

may play its own set of reeds independently, or so that the lower set of keys may play both sets of reeds (in the ordinary way of two stops) while the upper set of keys may play its own set of reeds only, in any other part of the key board, at the pleasure of the performer. The lower set of keys may be connected with the back set of valves, so that both sets of reeds may be played by the lower set of keys.

Claim.—The above fully sets forth the claim of the inventor.

No. 9,817.—Daniel H. Hovey, of Kilborn, Ohio.—*Improvement in Machines for Twisting Waxed Ends.*—Patented June 28th, 1853.



By reference to the annexed figure, this improvement will be readily understood from the claim.

Claim.—The combination of the revolving rollers or tubes *c c*, conical coupling cores *b b*, the spring tighteners *e e*, with the detaching levers.

(After the threads are secured in the cores properly, the operator turns a wheel around a few times, by which the cores are turned and the threads are thereby untwisted to make a good end or extremity. The *end* is speedily twisted by turning the wheel.)

No. 9,818.—E. Morewood and G. Rogers, of London, England.—*Improvement in coating Zinc with Lead.*—Patented June 28th, 1853.

The nature of this improvement consists in a compound sheet of lead and zinc. The zinc is coated with lead in the following manner: A suitable quantity of lead is placed in a pan, having the shape and size to mould a slab suitable for forming a sheet by extension between rollers, and kept at a heat a little above the melting point of zinc. Zinc, say three times the bulk of lead, is poured on the lead, when cooled down to about 300° Fahr. that compound is rolled out.

Claim.—Such a composite sheet as a new and useful manufacture, or article of merchandise of great value and importance, and which possesses the hardness, stiffness, and strength of zinc, with the capacity of lead to resist the action of oxydizing agents.

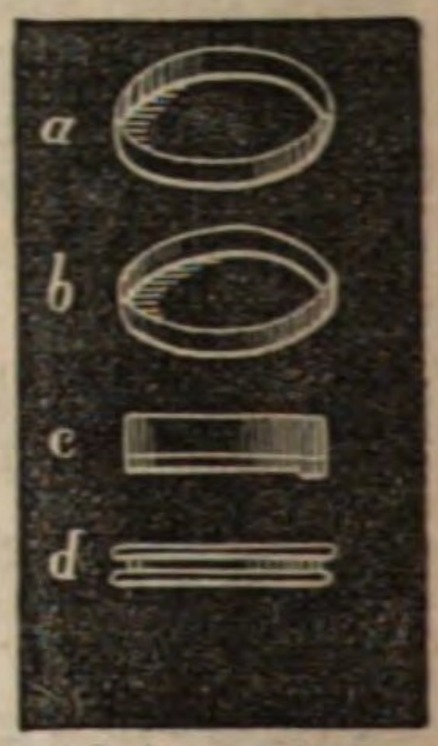
No. 9,819.—Levi S. Reynolds, of Indianapolis, Ind.—*Improvement in Bran Dusters.*—Patented June 28th, 1853.

This invention relates to the employment of an additional scourer, through which the finer grades of offal are passed after separation from the coarser, in order that they may be subjected to the requisite degree of friction for producing the desired effect, without involving the necessity of the coarse offal undergoing the same process, and consequently becoming injured by cutting; also, to the arrangement

of the bolting cloths so as to be capable of a vertical vibratory motion for preventing the clogging of the cloth; and further, to an arrangement by which a current of air is passed through the bolting cloths for throwing the flour and bran against them and effecting the separation in a superior manner.

Claim.—The employment of the conical roughened metallic scourer, in combination with the double disc rubber, the discs and pins of which always preserve the same relative positions—being arranged and operated in the manner and for the purposes set forth.

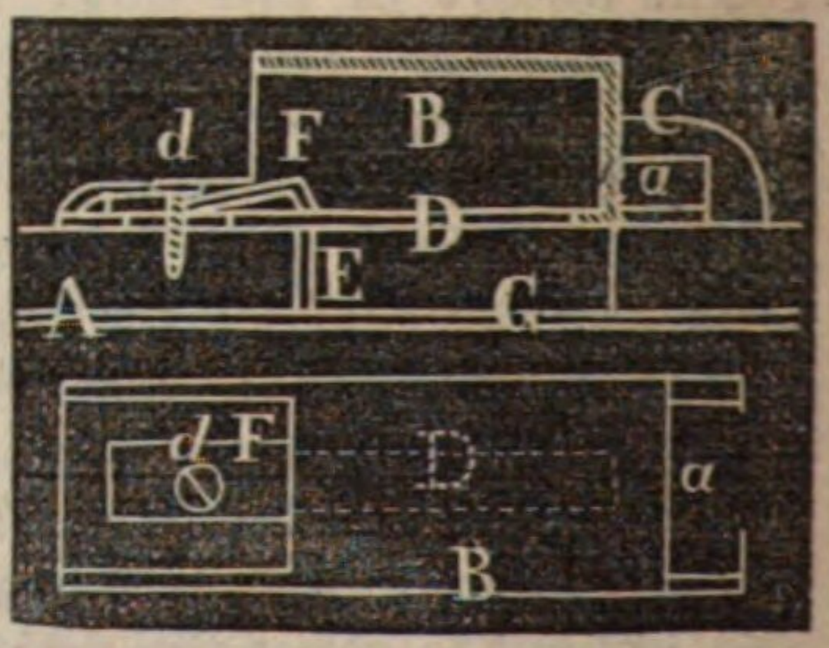
No. 9,820.—CHRISTIAN SHARPS, of Hartford, Conn.—*Improvement in Percussion Pellets.*—Patented June 28th, 1853.



Instead of the ordinary open percussion cap or pellet, the inventor makes a closed cap or pellet, by inserting detonating powder into two cylindrical shallow boxes, as shown in figures *a* and *b*, that fit into each other like the lid and bottom of a pill box; when these boxes are united, as shown in *c*, they are submitted to pressure, whereby an annular crimp around their periphery is formed, permanently uniting them as at *d*. When varnished with gum shellac they will be hermetically sealed, and the powder perfectly preserved.

Claim.—The above description fully sets forth the claim of the inventor.

No. 9,821.—EDMOND E. SHEPARDSON and EDWIN LUCAS, of New Bedford, Mass.—*Improvement in Tuning Melodeons and other Reed Instruments.*—Patented June 28th, 1853.



The nature of this improvement consists in securing the reed D to movable pipes or tubes, the reeds being arranged between stationary clamps E and F, which are brought nearer to, or further from the ends of the reeds. Consequently, by operating or moving the pipes or tubes B, the clamps E and F are brought nearer to or further from the ends of the reed; thus, the vibrating parts of the reeds may be lengthened or shortened, and a greater or less vibration of the reeds obtained, as desired. By this simple arrangement the instrument may be tuned with the greatest facility and accuracy. A is a part of a bellows. The lower clamp E is secured to the lower end of the slot or recess G in the upper board of the bellows; the upper clamp F has a small jaw or hooked projection which bears upon the upper surface of the reed.

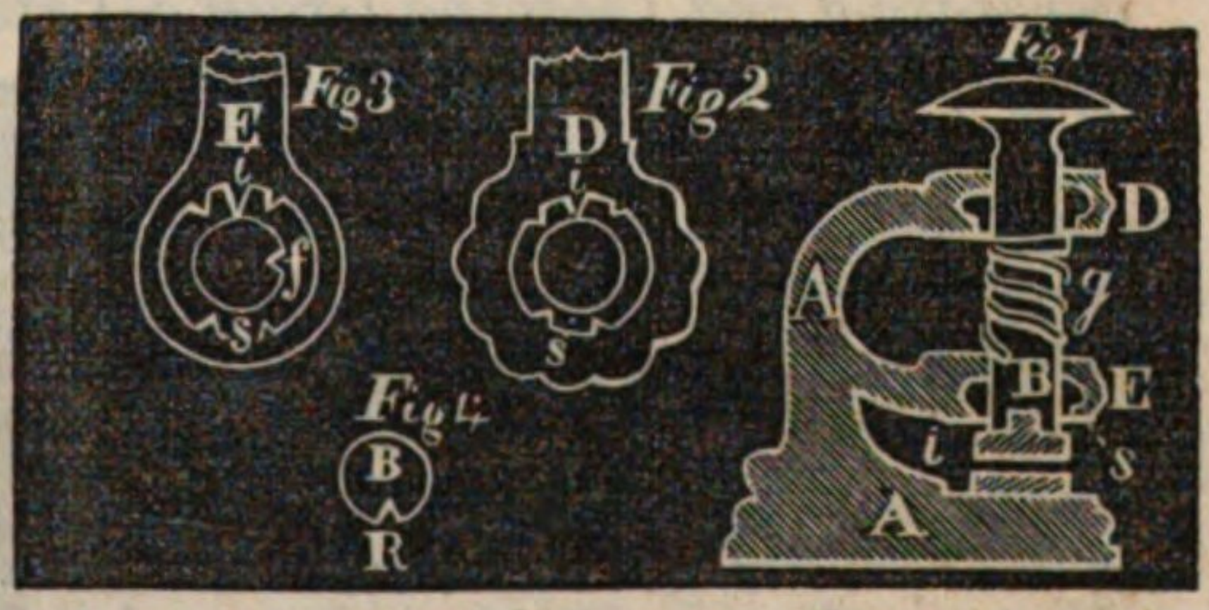
Claim.—Securing or attaching the reed to a movable pipe or tube B, the reed being placed between stationary clamps E F, by which, as the pipe or tube is moved, the vibrating portion of the reed may be lengthened or shortened, and the desired tone obtained.

No. 9,822.—LAUREN WARD, of Naugatuck, Conn., Administrator of RICHARD WARD, deceased, late of Naugatuck aforesaid.—*Improvement in Machines for Planing Irregular Shapes.*—Patented June 28th, 1853.

This improvement consists in the use of jointed levers suspended from a bar or frame above, and the crank by which the levers are operated to elevate and depress the front end of the inner part of the carriage to the desired extent for planing the article in an elliptical shape of polygon; and in the use of the notched collet on the front or toothed centre, connected with the ratchet wheel, which by means of the curved bar raises the front end of the inner part of the carriage still higher, and more suddenly than the operation of the levers would do, at the proper time to give form to a more prominent part of the article, as the square part of a spoke.

Claim.—The inventor claims the above named parts, combined, arranged, and operating as described, for the purpose aforesaid.

No. 9,823.—JAMES FOSTER, Jr., and PLATT EVENS, Jr., of Cincinnati, Ohio.—*Improvement in Bushing for Seal Presses, &c.*—Patented June 28th, 1853.

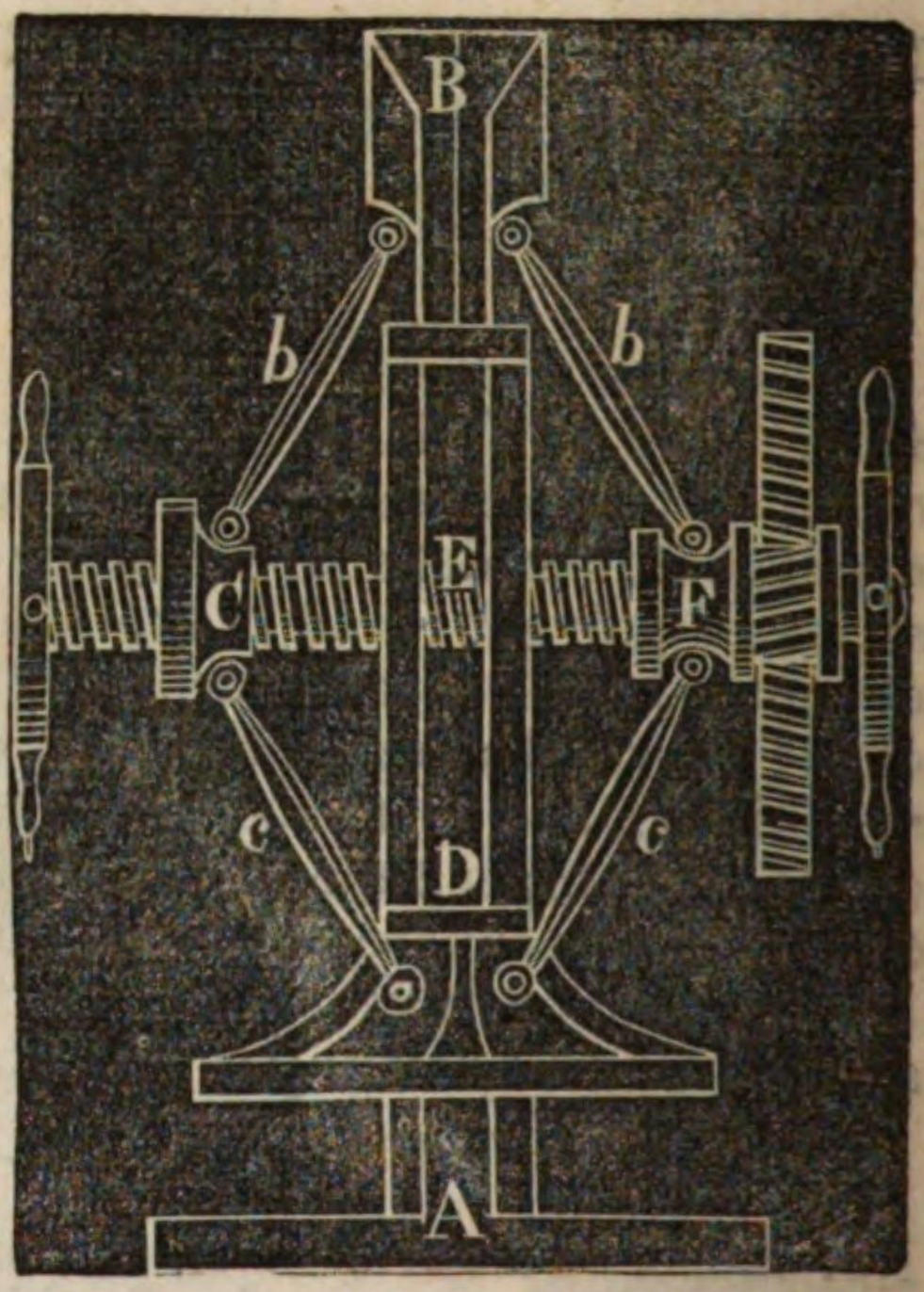


The nature of this invention consists in dividing the soft metal for bushing purposes, around a mandrel, for instance that to which the die of a seal press is attached, in such manner that the metal is prevented from shrinking as heretofore on the mandrel, and is thereby allowed to shrink on itself towards the box or cavity in the press frame, so that a sufficiently free motion after cooling, and yet a good working fit, is obtained for the purposes intended.

Fig. 1 is a longitudinal and vertical section through the stock boxes, mandrel, and die. Figs. 2 and 3 are each a transverse section through the upper and lower boxes. Fig. 4 shows a transverse section of the mandrel at the portion where it passes through the lower box. A A represents the stock of a press; E D, the guides or boxes. B is a mandrel made of hard cast iron or other metal; *g* is a spiral spring around the mandrel between the two guide boxes. The metal is prevented from forming a continuous ring around the mandrel by means of feathers *i i*.

Claim.—The mode of preventing the shrinking and binding of metal bushings, when cast upon screws, mandrels, spindles, shafts, and the like, by the insertion of feathers either movable or fixed in the boxes to be bushed, for the purpose of separating or breaking the ring of bushing metal, substantially in the manner and for the purpose set forth herein.

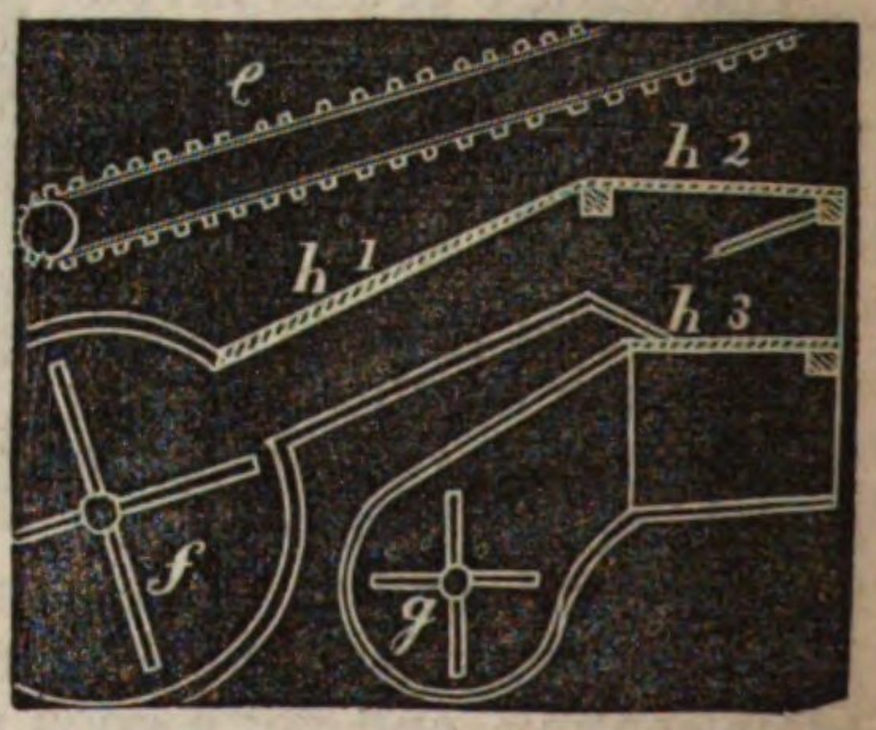
No. 9,824.—Amzi C. Semple, of Cincinnati, Ohio.—*Improvement in Presses.*—Patented June 28th, 1853.



A represents the platform, B cap, *b b* and *c c* arms of toggle-joint which connect the nuts with the cap and platen D, E the screw, C and F nuts.

Claim.—Sustaining the gear-frame of a double toggle-press, by the toggle arms and joints (which connect the nuts with the cap and platen) independent of and disconnected from the frame of the press, by attaching the same firmly to the nut; in combination with supporting the screw by the nuts thus sustained only.

No. 9,825.—Napoleon B. Lucas, of Otter Creek, Ill.—*Improvement in Separating and Cleaning Grain.*—Patented June 28th, 1853.

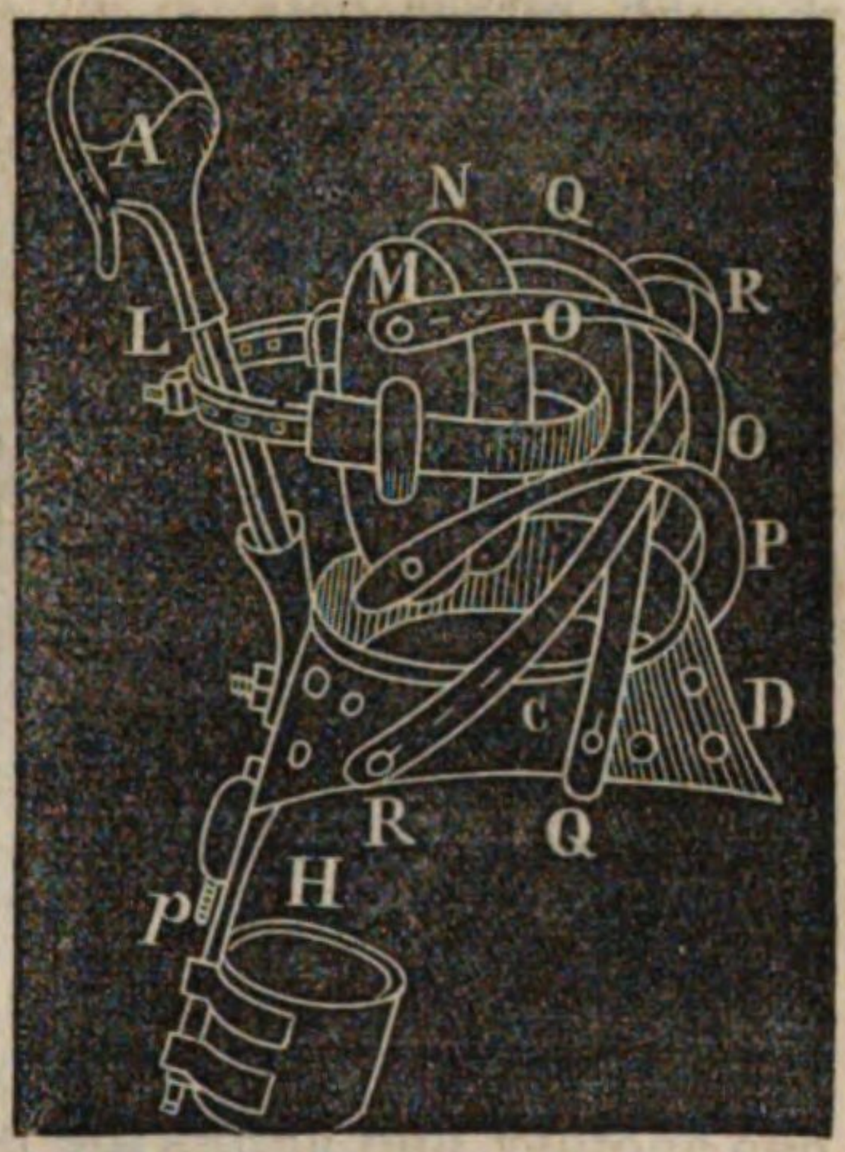


This improvement is confined to the winnowing part of threshing machines. The figure represents the screen h^2 projecting from the rear end of an inclined screen h^1, which has at the front a fan-blower *f*; there is another and smaller fan-blower *g* attached to the lower screen h^3; *e* is the grain and straw carrier.

Claim.—The auxiliary screen h^2 placed in a horizontal position or nearly so, and projecting from the rear end of the inclined screen h^1, so as to be out of the axis of the blast, for the purpose of catching the blighted and lighter kernels of grain, which may be blown beyond the rear extremity of said screen h^1.

No. 9,826.—Alanson Abbe, of Boston, Mass.—*Improvement in Instruments for correcting Lateral Deviation of the Spine.*—Patented July 5th, 1853.

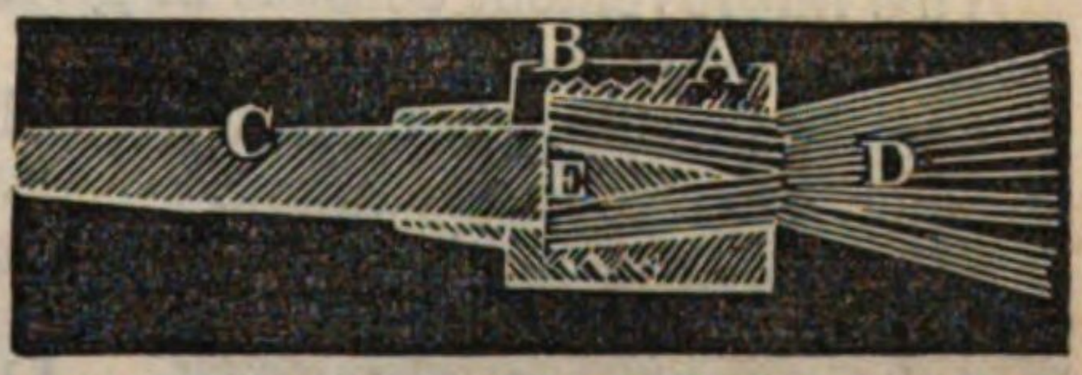
This instrument is secured around the hips by the belt D, and the crutch A, placed in the axilla and secured to the shoulder and the body by the shoulder-straps and the steel band L, and the pads M N and their straps. After adjusting the lever or bar H to its correct position, the thigh is moved up to it, and confined to it by the padded strap attached to its lower end. Whenever, during the correction of the deflection of the thigh from its natural or true position, it may be desirable to bring the lever H outwards, or laterally at a greater angle, a key may



be applied to the screw P, so as to move a wedge connected with that screw upwards. This instrument is intended to be worn in a sitting or standing position; the pads M N being made to rest on the prominent points of the back and chest; by means of the adjusting screws the centre of gravity of the body can be thrown directly over the foot of the leg to which the instrument is applied, whereby the correction of spinal or thigh deflection is insured.

Claim.—The instrument made of a combination of the crutch A, the hip-plates C, the plates E I, the wedges and screws thereof, the breast or body-band L, and its pads and straps, or other contrivances for confining the whole instrument to the thigh and body, the whole being applied together and made to operate in the manner and for the purpose set forth.

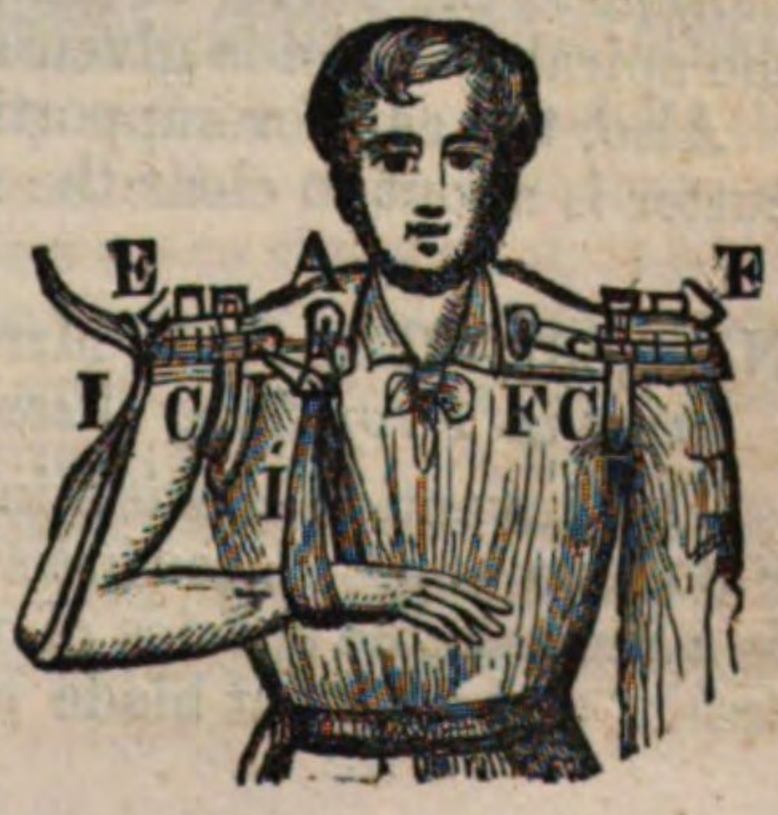
No. 9,827.—J. Cross, of New London, Ohio.—*Improvement in Brushes.*—Patented July 5th, 1853.



The figure represents a section of this improved brush. C is the handle, which has at its lower end a female screw B; this screw works on to a metallic casing A with a male screw; into this casing the bristles are placed: a wedge E is inserted in the centre of the casing, which is forced down between the bristles by the screw on the handle C, and kept in place. The bristles can be readily attached to the handle and removed therefrom, and readily tightened when loose.

Claim.—A brush consisting of a divided case to hold the handle and bristles, in combination with a wedge forced among the ends of the bristles within the case, and tightened from time to time so as to squeeze and hold them, by screwing the two parts of the case together.

No. 9,828.—Almiron M. Day, of Bennington, Vermont.—*Improvement in Clavicle Adjusters.*—Patented July 5th, 1853.



This adjuster is designed to rest over the scapula, to retain the shoulders in their natural position, acting as a counter-brace during the healing process of the fractured clavicle; it is held in position by a strap c c at each extremity; on the top of the yoke are ears,

through either pair of which, to suit the size of the patient, are passed the straps furnished with sliding pads c' c'; at the extremities of the arms of the yoke A are the hooks E, and in front the hooks F, from which is suspended the strap I, on the fractured side, by a buckle; this strap has a sling, into which the elbow is placed; the strap I', held by the hook F, supports the forearm.

Claim.—The arms of the yoke A, hollowed as described, in combination with the straps C and I, attached and operating as described; by means of which the acromion process of the scapula is compressed, and the arm held in position for uniting a fracture of the clavicle.

No. 9,829.—GEORGE H. HAZLEWOOD, of Boston, Mass.—*Improvement in Cradles for Children.*—Patented July 5th, 1853.

This improvement is fully explained by the claim alone.

Claim.—Constructing the two sides of the bed frame of a cradle, so that portions of each may be turned round and arranged parallel to one another, and across the bed frame, and thus convert the bed frame into a "*tête-à-tête*" seat or chair.

No. 9,830.—CHARLES W. LANCASTER, of New Bond St., England.—*Improvement in the Manufacture of Cannon and other Firearms.*—Patented July 5th, 1853.

This improvement consists in giving a peculiar shaped bore to the gun, whereby the angular groove usually cut in such arms (more generally in rifles) is dispensed with, while the advantageous effects of such grooves are retained.

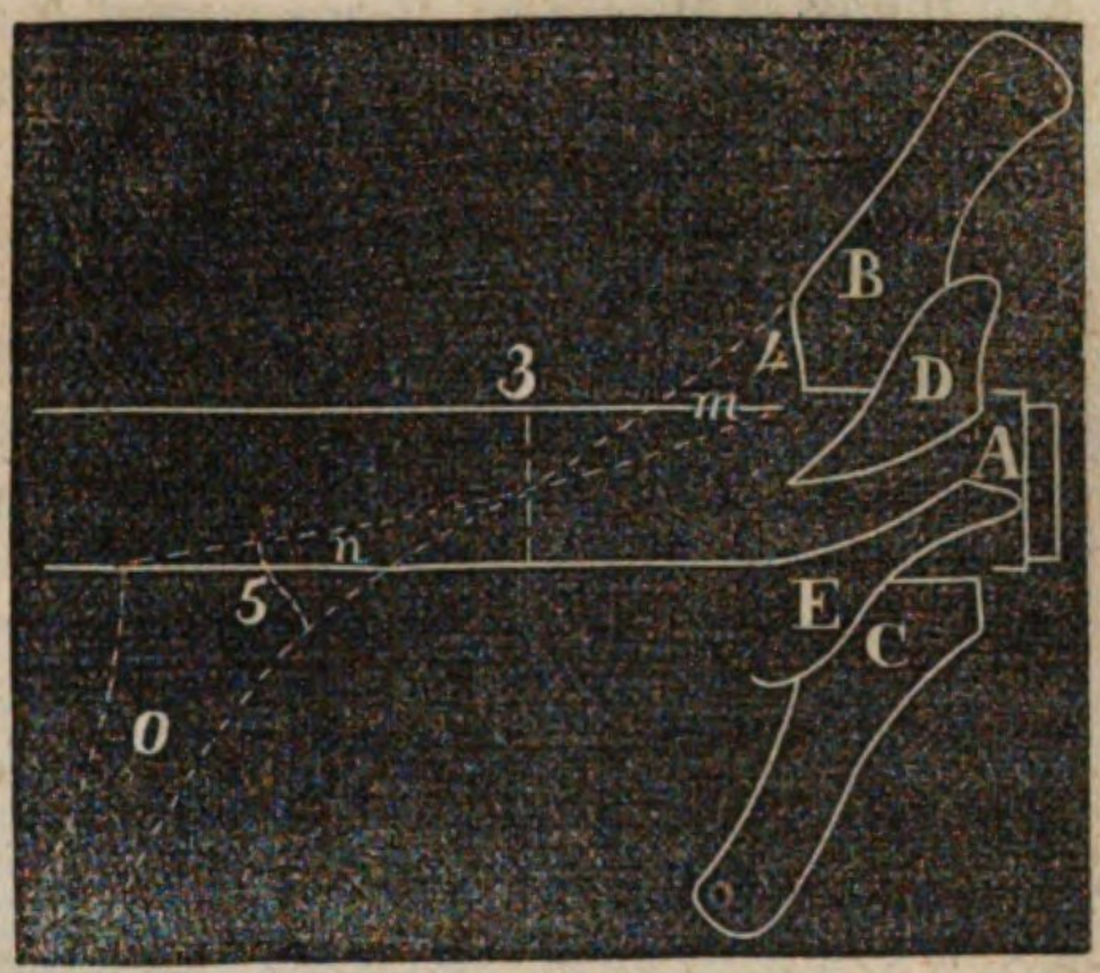
Claim.—The method of boring the barrel of a gun or other fire-arms, so that a cross section thereof would be in the form either of an ellipse, or of a series of curves. Also the construction of the boring tool for giving to the bore a form of which the cross section is not a true circle; that is to say, the combination of the cutter-bar with the boring tube, the bar passing through the tube eccentrically, the axes of both being parallel; also the bar with its inclined plane, in combination with the cutter for regulating the depth of the cut; also the expanding collar, the inclined or bevelled space on the boring tube, with the other parts in connexion therewith, for the purpose of guiding the boring tool when boring out an irregularly formed cylinder.

Also, the curved rail, or other like fixture for giving the proper motion to the barrel of the gun during the boring operation, by which the spiral or twist is given as described.

Also, the cap for supporting the boring tube just at the moment the cutter is about to clear the muzzle.

No. 9,831.—THOMAS L. MITCHELL, of Birkenhead, England.—*Improvement in Propelling Vessels.*—Patented July 5th, 1853.

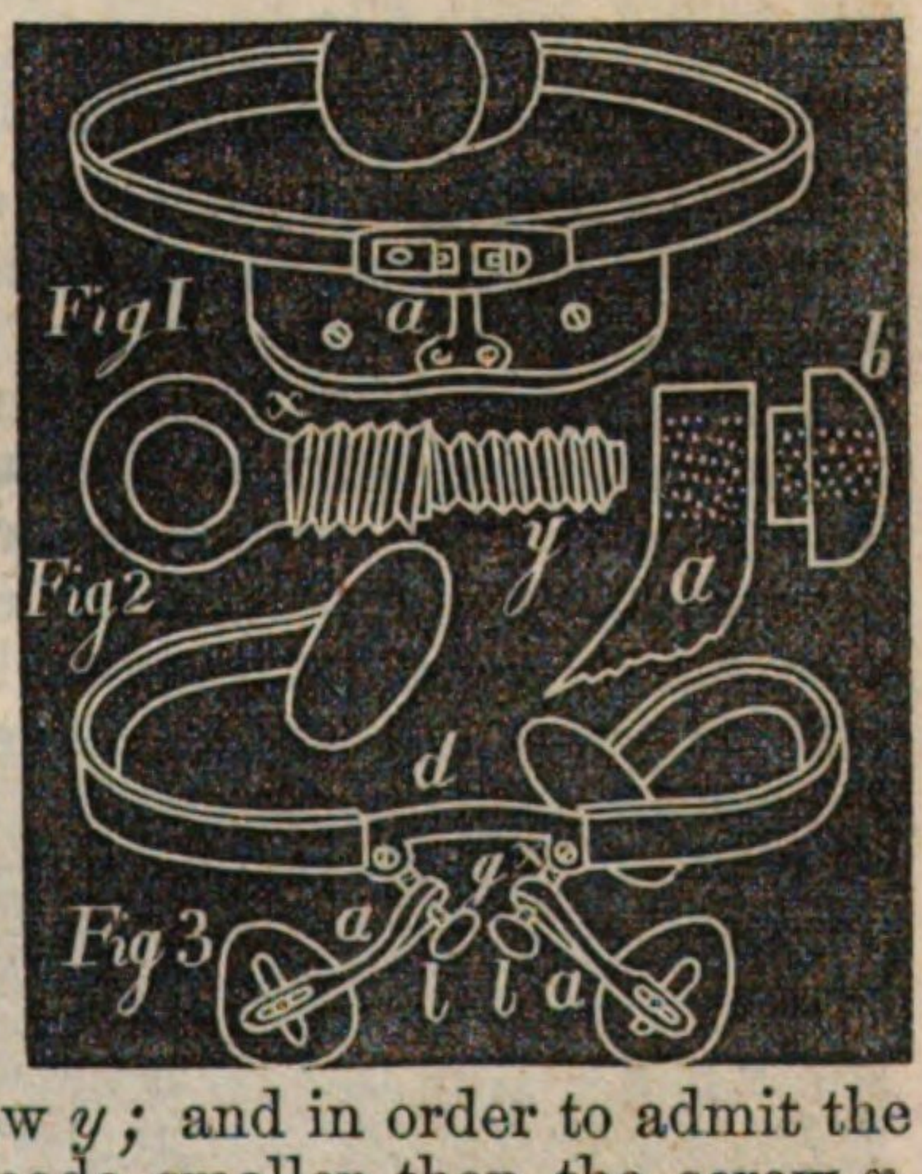
This invention consists in applying an instrument of the nature of a "Bommareng," placed in a suitable axis, as a propeller. The Bommareng is a remarkable species of missile in use among the savages of Australia, and is a bent blade so warped as to form a portion of a screw.



The substitution of two semi-bommareng blades for one whole one admits of the use of a hub A, of one half the length required for a single blade; but even this is in many cases inconveniently long, therefore to render the instrument still shorter the inventor proposes to cut the blade at the lines 3, 4 and 5, into four parts, and translate the parts *m n* and *o*, along the hub to the positions in which they are represented, D E C. Thus divided, the blades occupy the same angular position relative to the axis of the hub A, which they would have done had they remained as one complete blade attached to the hub in one piece.

Claim.—Constructing the blade or blades of the same, upon the principle of the "Bommareng."

No. 9,832.—JOHN NORTH, of Middletown, Connecticut.—*Improvement in Trusses.*—Patented July 5th, 1853.



This improvement consists in employing a right and left screw and nut in a peculiar manner, by which the wearer can with great facility adjust the pressure of the pads without removing the truss. When this adjustment is combined with a swivel joint upon the pad, it secures every important adjustment, and facility for adjusting inguinal pads. Figures 1 and 3 exhibit the adjustments applied to abdominal and inguinal trusses. Figure 2 is a dissected view of the right and left screw and nut adjustments. The arm of the truss pad *a* is screwed upon the right screw *x*, and the nut *b* is screwed upon the left screw *y*; and in order to admit the arm *a* to the right *x*, the screw *y* is made smaller than the screw *x*. It will be seen that when the nut *b* is close up to the arm *a*, it holds the arm from being moved in one direction, but not in the other. The swivel joint *d* is controlled by a common set-screw, and the pad joint *e* is such as has been commonly used for truss pads.

Claim.—The mode of adjusting the pressure of the pad, by the employment of the right and left screw, and the adjusting nut, in combination with the pad lever, in the manner and for the purpose set forth.

No. 9,833.—William Porter and Edward A. Tuttle, of Williamsburgh, N. Y.—*Improvement in Lanterns.*—Patented July 5th, 1853.

This invention consists in the method of uniting or arranging the parts of a lantern, by means of one or more small rods, extending from the bottom or cup of the lantern up inside the glass globe to the top, and there secured by a catch, by means of which a more convenient and economical mode of shipping and unshipping the lantern is obtained, and by the peculiar position of the lamp glass between the bottom and top, avoiding the necessity of fastening the same either to the top or bottom, by means of plaster sets.

Claim.—The inventor's claim is fully set forth in the above description.

No. 9,834.—Amzi C. Semple, of Cincinnati, Ohio.—*Improvement in Paddles for Vessels.*—Patented July 5th, 1853.

The object of this invention is to obviate the shock occasioned by the floats of paddle wheels (when made of non-elastic or solid substances) when entering the water, by making the floats of vulcanized India rubber, so constructed that they enter the water nearly edgewise.

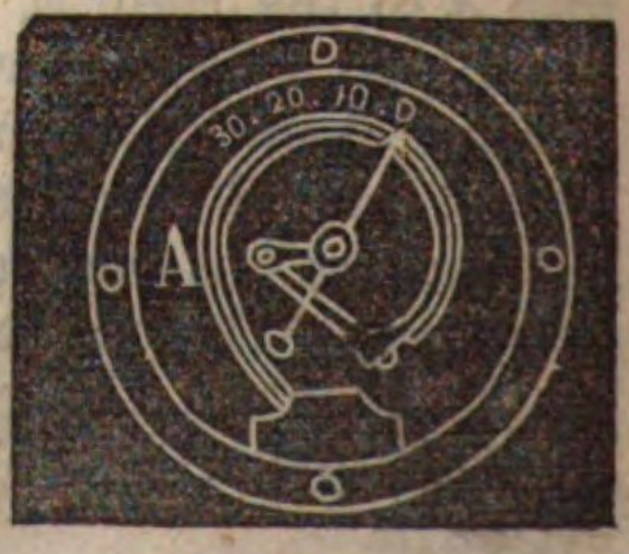
Claim.—The use of vulcanized India rubber or other similarly elastic substance, which will produce the intended effect, in the construction of floats of paddle wheels, for the purpose and in the manner herein described.

No. 9,835.—Noah J. Tilghman, of Salisbury, Md.—*Improvement in Crow Killers.*—Patented July 5th, 1853.

This instrument consists of a sharp pointed and bearded rod let into a sliding block, inserted into a vertical chamber formed in the head of a rough post planted where crows are in the habit of frequenting. When the spring which is contained in the post is compressed, the rod is drawn down below the head of the post and held in that position by a dog bearing against an arm or projection of the sliding block until started by the weight of a crow when he lights upon the top of the post, bearing down a trigger which acts against the dog, and liberates the dart, which is forced suddenly upwards by a spring, and pierces the crow.

Claim.—The above described instrument with all its parts as arranged, combined, and operating.

No. 9,836.—Edward H. Ashcroft, of Boston, Mass.—*Improvement in Pressure Gauges.*—Patented July 12th, 1853.

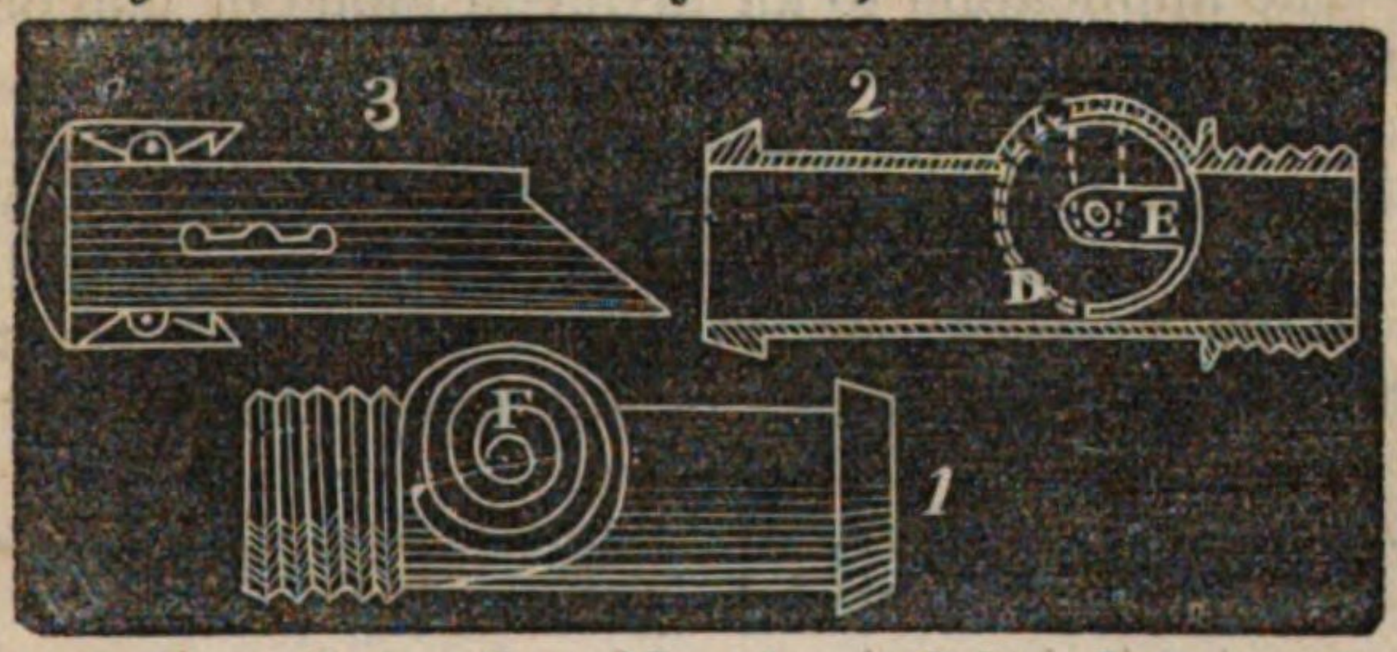


The chief feature of this improvement consists of an elastic flattened tube, bent in a horseshoe, spiral, or other curved shape, being in a certain degree elastic. One extremity of this tube is fixed in position and connected with a stop cock, by means of which a communication can be opened between it and the steam or other fluid whose pressure is to be measured; the

other extremity, being hermetically sealed, is left free to be moved by any force tending either to straighten or bend the tube. The closed extremity of the tube is connected either directly or by a link and a toothed sector and pinion to an index pointer, which traverses the area of a dial plate graduated to given pressure. In the figure representing the gauge, A is the elastic bent tube.

Claim.—The method herein described of rendering the indications of "Bent Tube Pressure Gauges" permanent and reliable by constructing the tubes of precious metal.

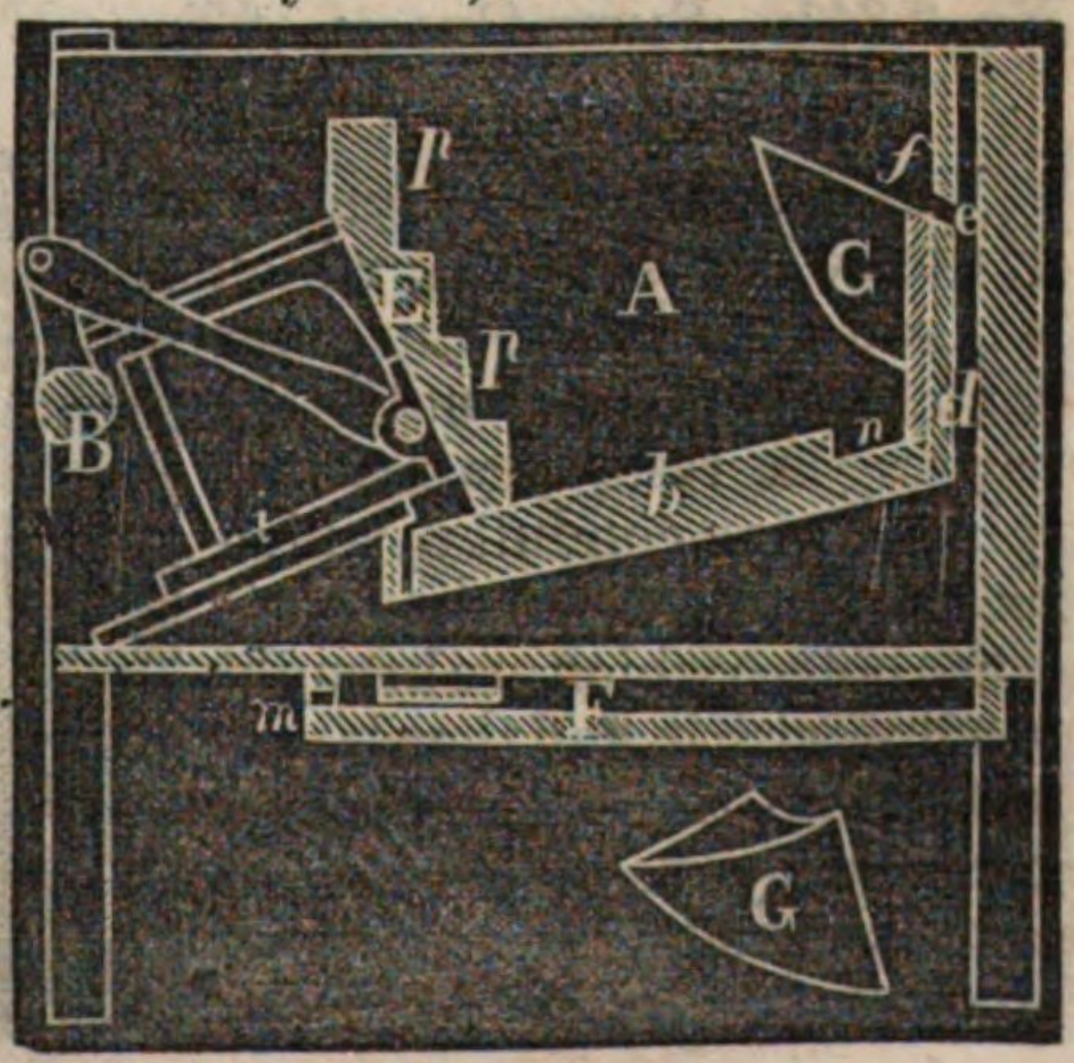
No. 9,837.—CHAUNCEY W. CAMP, of Hartford, Conn.—*Improvement in Shot Charges.*—Patented July 12th, 1853.



See figures 1, 2, and 3. 1, a side view of the charge tube; 2, a section of the same; 3, a side view of the slide. When the slide is pushed into the charge tube, the point of the bevel strikes the lower part of the revolving cut-off at D, and the bevel part of the slide forces the revolver round till it gets to the position at E, which permits the shot in the belt to pass freely into the slide, and when withdrawn, the force of the spring F causes the revolver to act upon and cut off the shot from the bevel part of the slide, and instantly close up the opening at D.

Claim.—The manner and method of making, and the application of the *cut-off and spring* to shot charges, substantially as described.

No. 9,838.—E. J, DICKEY, of Hopewell Cotton Works, Pa.—*Improvement in Butter Workers.*—Patented July 12th, 1853.



This machine is worked or operated as follows. The butter is placed in the box between the partition *d* and the reciprocating presser E, which is then put in motion; upon being pressed up, the butter is divided by the cutters or knives G G, &c., and the buttermilk therein near the cutters is forced up along their surfaces by the pressure, and, flowing into the grooves *e e*, &c., is discharged into the trough F, and caught through the orifice *m* in a suitable receptacle. *n* is a re-

cess to prevent the butter from following the presser *p p* in its retreat from the knives.

Claim.—The adjustable knives G G, &c., arranged within the box of the machine, and operating in conjunction with the reciprocating presser. Also, the recess or depression *n* in the bottom of the box, to prevent the butter from adhering to the presser and being drawn back with it.

No. 9,839.—GEO. M. DIMMOCK, of Springfield, Mass.—*Improved apparatus for Illustrating the Motion of a Pendulum upon the Earth's Surface.*—Patented July 12th, 1853.

Claim.—The application to an artificial globe of one or more pendulums, the rods of which are formed of delicate springs, so as to vibrate evenly to all points of the dial, the plane of which is at right angles to the pendulum when at rest. Also, bending or springing the pendulum rods to counteract the gravity of the earth, so that when at rest they will be straight, and on the line from the point of suspension and the centre of the globe; or anything substantially the same.

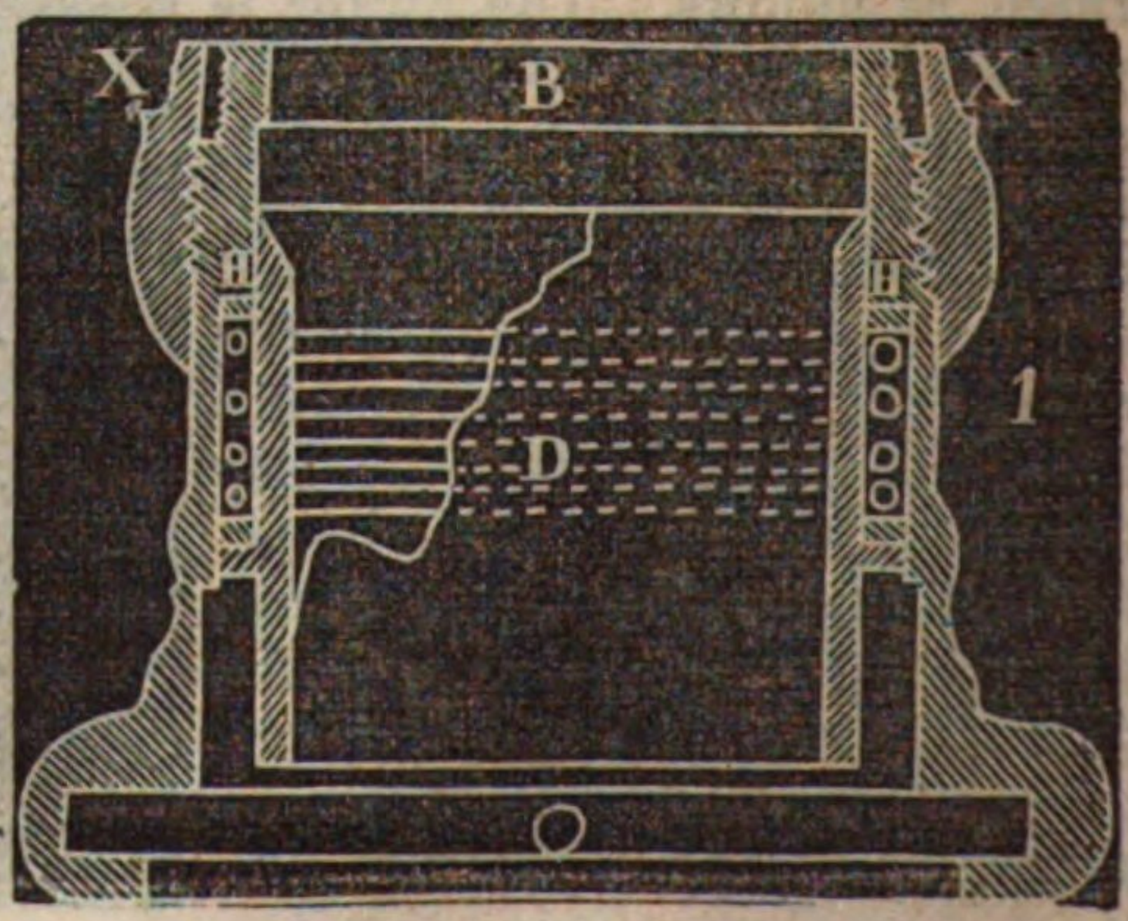
No. 9,840.—JOHN J. FULTON, of Monongahela City, Pa.—*Improvement in Tanning.*—Patented July 12th, 1853.

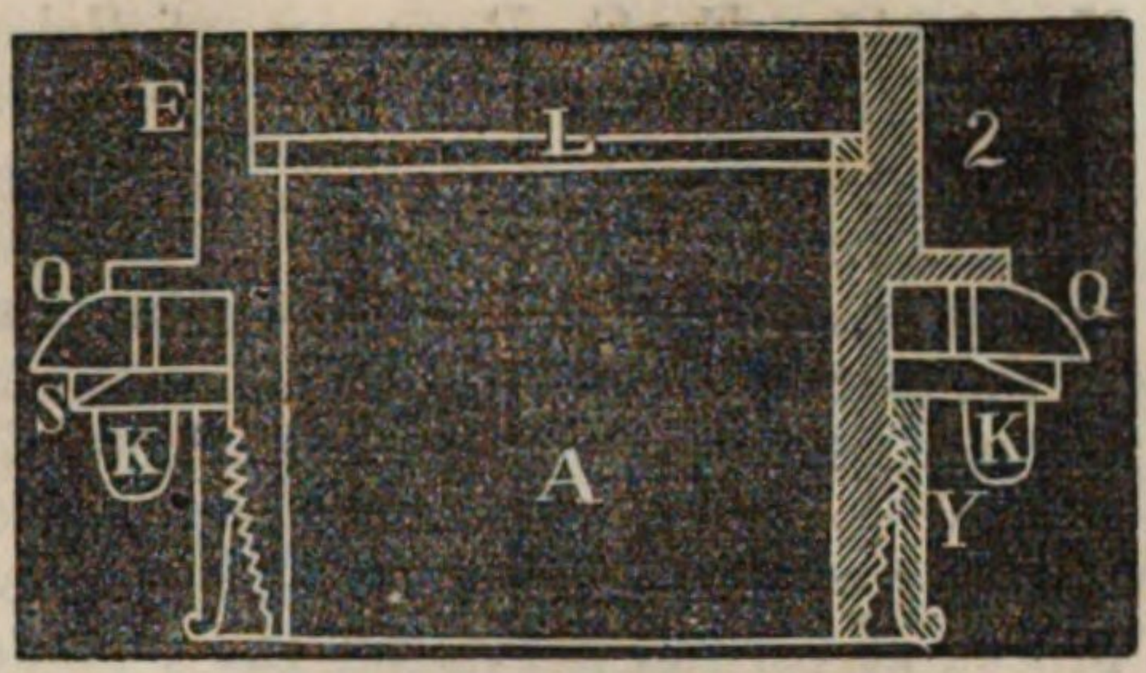
The nature of this invention consists in the employment of from two to three pounds of muriate of ammonia in combination with seven pounds of nitre for a pack of 20 slaughter hides, or one hundred calf skins (after having bated and cleansed the hides). The ingredients are dissolved in sufficient water to cover the hides, and are left in this bath until enough of the composition of these ingredients is absorbed; the hides are then placed for one day in a weak bark liquor, and then in strong bark liquor from three to five days, when they will be in good condition for laying away in strong leached liquor.

Claim.—The use of muriate of ammonia, in combination with nitre, for the purpose of suspending putrefaction, adding strength to the animal tissues, and for usual purposes in the manufacture of leather, as set forth.

No. 9,841.—SMITH GROOM, of Troy, N. Y.—*Improvement in Hose Coupling.*—Patented July 12th, 1853.

This improvement consists in the swivel E (fig. 2), which is made to slide into the outer chamber B (fig. 2), until the packing L rests against the spiral spring conduit D, which recedes by pressing the points of the bolts O which are brought to a line with it, and then is projected into the outer circular groove O, by the bolted springs Q and N; and is thus effectually coupled simply by press-

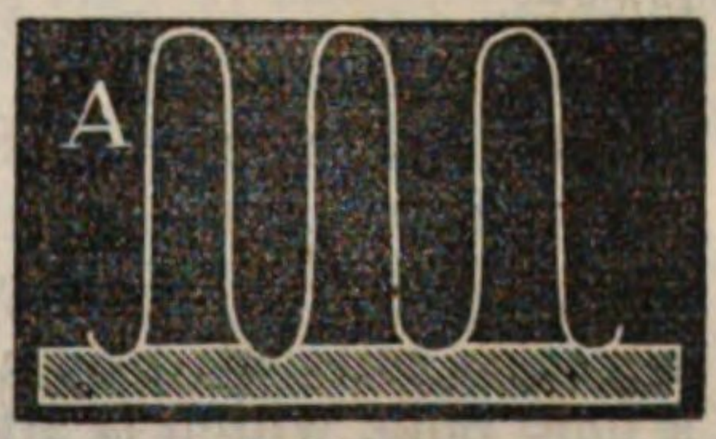




ing the said section together. s is the guard plate, P the partition with the key knob, which makes the coupling perfectly secure. To separate the sections, the lock bolt R is pushed back; then by pressing against the knob K, the circular guard plate s is turned in order to bring the studs v from their usual place in the detent w.

Claim.—The spring conduit D and the appendages by which it is moved longitudinally, and is held firmly against the packing L and the pads K, or rim in which the packing rests, to prevent the joint from leaking; in combination with the arrangement of spring bolts and their appendages, as shown on section A, with the circular groove o, for the purposes set forth.

No. 9,842.—RICHARD MONTGOMERY, of New York City.—*Improvement in Sheet Metal Beams.*—Patented July 12th, 1853.



The object of this invention is the construction of metallic beams of greater lightness and strength, and at less cost; which is effected by bending sheet metal in such a form as will give it the proper rigidity and transverse strength as shown in the figure.

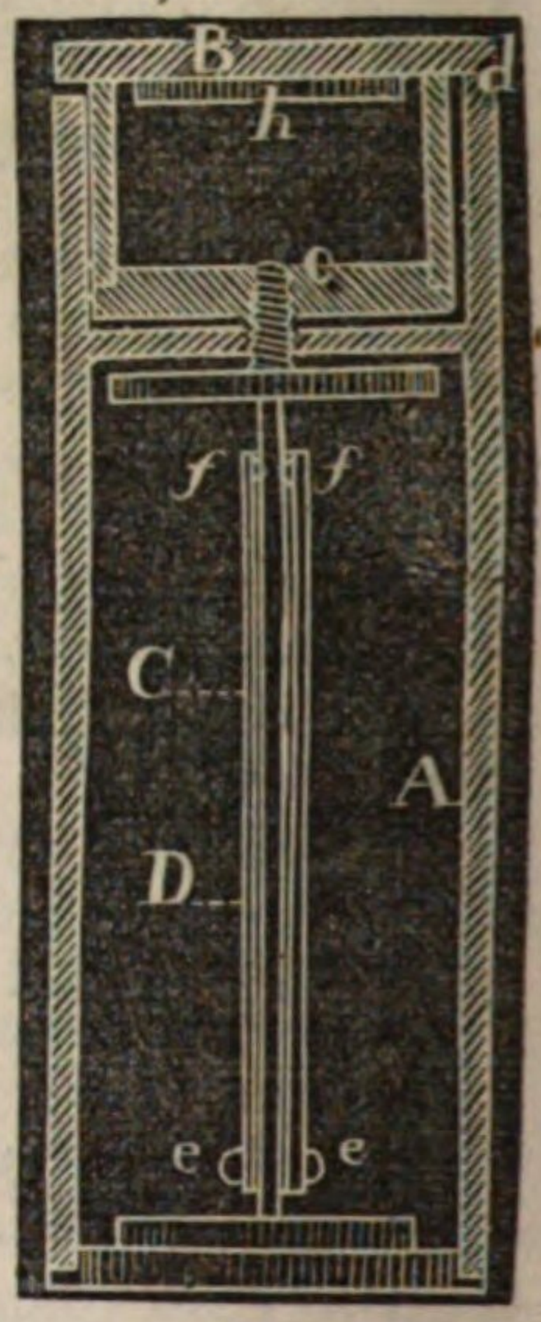
Claim.—A beam formed of sheet metal bent into a series of longitudinal folds, the sides of which are flat and parallel, and the tops and bottoms uninverted and inverted arches, respectively. Also, the combination with such a beam of a pair of saddles to support its ends, substantially as set forth.

No. 9,843.—MYER PHINEAS, of New York City.—*Improvement in Metallic Pens.*—Patented July 12th, 1853.

The claim will explain the nature of this improvement by reference to the annexed figure.

Claim.—Constructing the back of the pen with a series of transverse ribs and slots, and leaving two flat springs beneath, nearly parallel to the back, and free to bend between the ribs; the effect of this construction being to give to the pen combined stiffness and flexibility within certain limits, resembling that produced by a series of vertebral articulations, and which is found to render the working of the pen more easy and pleasant than any form of metallic pens heretofore essayed.

No. 9,844.—H. G. Robinson, of Schuylkill Haven, Pa.—*Improvement in Coin Safe and Detector.*—Patented July 12th, 1853.

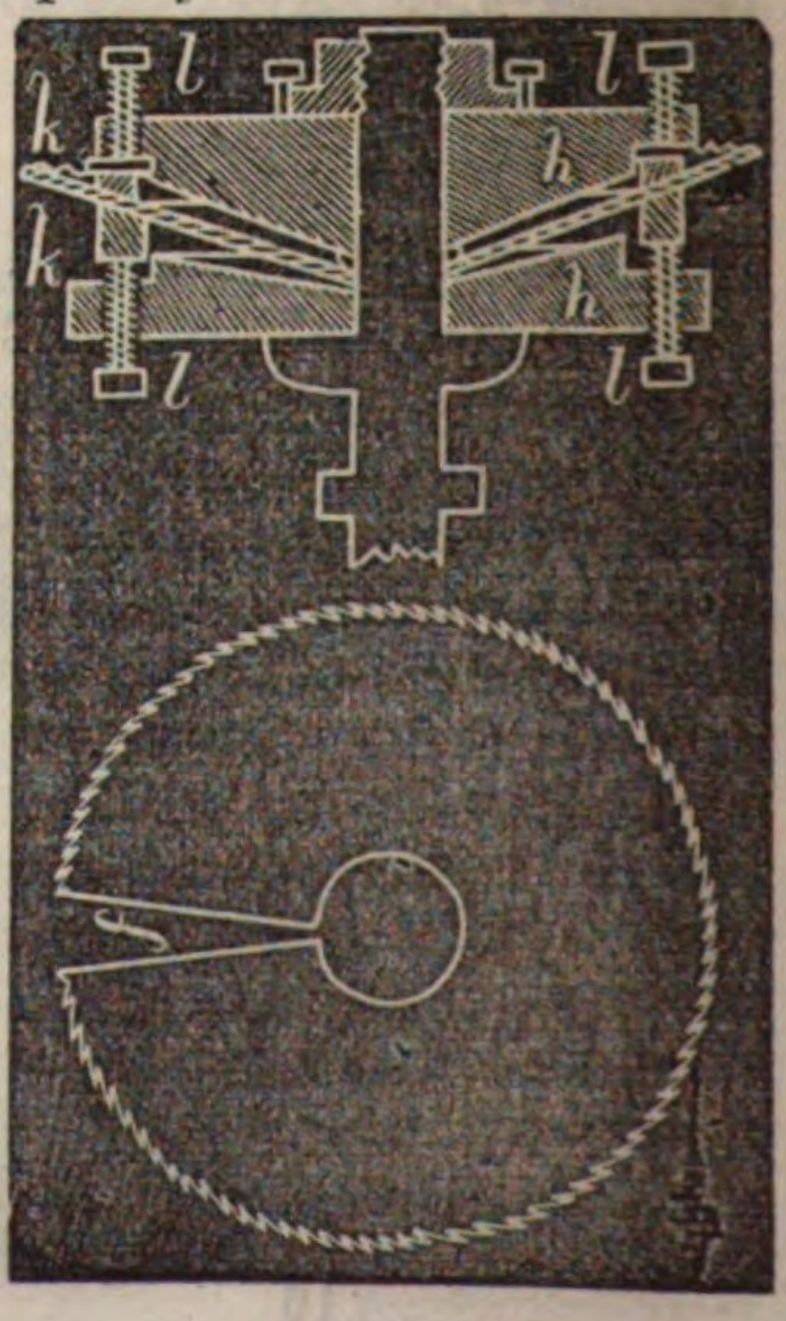


To detect counterfeit coin, the gauge box B is withdrawn from the case A. If the coin will pass snugly through the recess *d* into the box, it must be of the same dimensions as a genuine coin; and if counterfeit, it will be lighter. The clamps *c* are then withdrawn from the case A, and the small points *f f* are inserted in fulcrum holes which are placed at certain points on the outside of case A, forming a kind of balance, so that when a genuine coin is in the box B and the box adjusted in the case A, the case A will exactly balance when suspended at the fulcrum holes; the coin being represented by *h*. If the coin is to be weighed, it must be moistened with spittle, to cause it to adhere to the end of the box at *h*.

Claim.—The peculiar construction of the implement, and the arrangement of its parts, by which combination a portable receptacle for both coin and bank notes is obtained, convenient for the pocket.

No. 9,845.—Samuel T. Sanford, of Fall River, Mass.—*Improvement in Boring Machines.*—Patented July 12th, 1853.

The nature of this invention consists in fitting the auger to a stock, which is connected by a ball and socket or other universal joint with a long pole, which is attached to a suitable standard or base, in such a manner as to move in horizontal and vertical arcs; and in giving revolution to the auger by means of a pulley which is fitted to its shank, and driven by a band from another pulley which is fitted to a shaft working in the base. The attachments of the pole allow the auger to be easily brought to any required point, in the bottom or any other part of a ship or other vessel, and to be held in position to bore in any direction. The object of this machine is, boring "tree-nail" holes in vessels.



Claim.—The inventor's claim is substantially embraced in the foregoing description.

No. 9,846.—Ephraim R. Wells, of Uniontown, Pa.—*Improvement in Adjusting Dishing Saws.*—Patented July 12th, 1853.

This improvement consists in adjustable rings *k k'*, which are regulated by screws *l l l l* passing through their respective

washers *h' h'*, by which any required curvature can be given to the saw. *f* represents a circular saw, in which an angular incision is made extending from the eye to the edge of the saw.

Claim.—The adjustable rings, in combination with the concave and convex washers, for the purpose described.

No. 9,847.—Ithamar P. Smith, of Rochester, N. Y., and Oran W. Seely, of Albany, N. Y.—*Improvement in Straw Cutters.*—Patented July 12th, 1853.

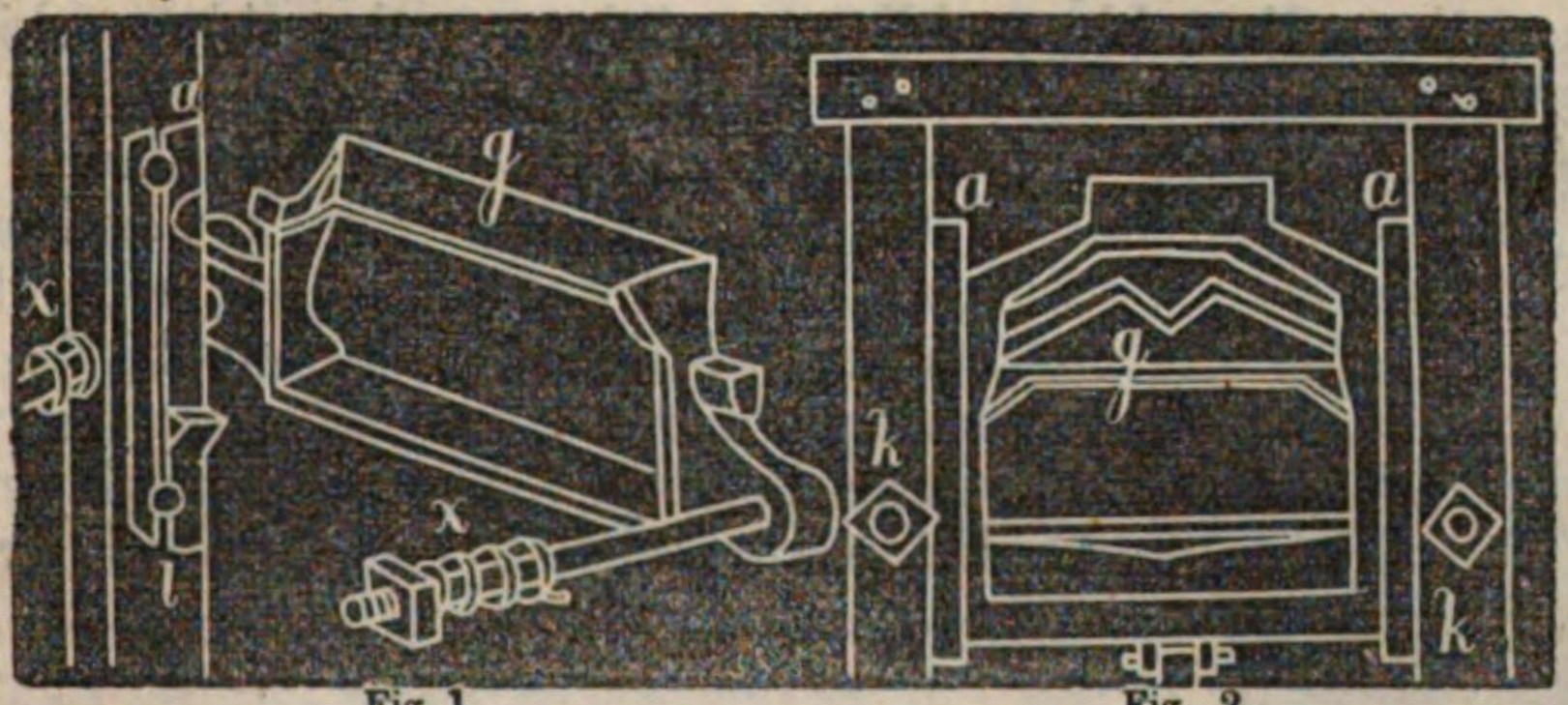
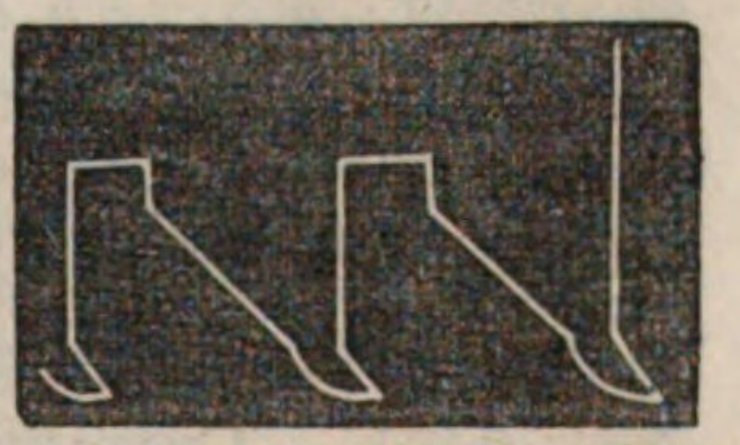


Fig. 1. Fig. 2.

The figures represent this improvement: *g* (fig. 2) being the knife, *g* (fig. 1) the frame against which the knife operates; the frame is adjusted by means of two spiral springs *x x;* the springs pass through the frame post, and are regulated by the screws *k k* (fig. 2).

Claim.—The arrangement of the metallic guide, in combination with the knife-frame, the knife formed as specified, and the frame against whose front edge the knife is intended to play, the last mentioned frame to be adjusted by springs and screws contained in hollow boxes or cars, and by trunnions and shoulders.

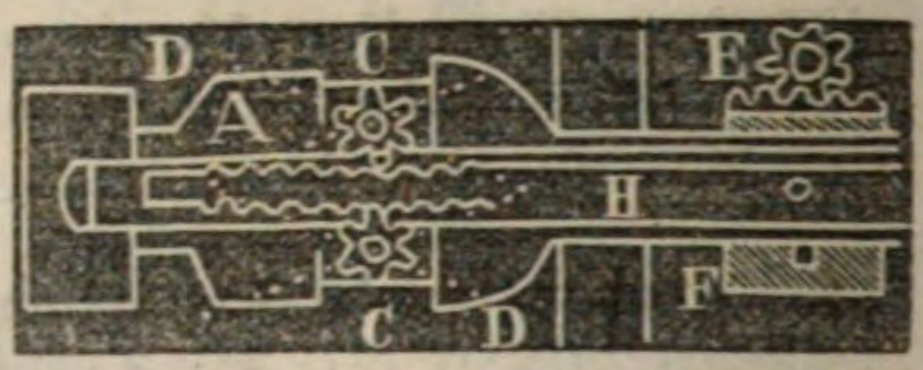
No. 9,848.—Nathan T. Coffin, of Knightstown, Ind.—*Improvement in forming Teeth on Mill Saws.*—Patented July 12th, 1853.



The nature of this invention consists in forming the points of the teeth entirely by swedging: this is accomplished by means of a die in which the ordinary straight-edged tooth is secured, and the bent or chisel form is given to the point by repeated blows of the hammer. Also, in dressing and sharpening the saw by means of a file gauge, in which the files are so arranged that no one tooth can be operated upon more than another, and by means of which the cutting edges are kept in the same plane, and any inequality in the set of the teeth removed.

Claim.—The dies and gauge constructed as described, by means of which uniform chisel points are given to saw teeth by swedging. Also, the combination of the files and the block-tinned surface, and regulating screw, forming together the file gauge; by means of which, when used in combination with the bevelled file, the chisel-pointed saw teeth are dressed, jointed, and have their edges rendered uniform.

No. 9,849.—Charles F. Brown, of Warren, R. I.—*Improvement in Adjustable Screw Propellers.*—Patented July 12th, 1853.



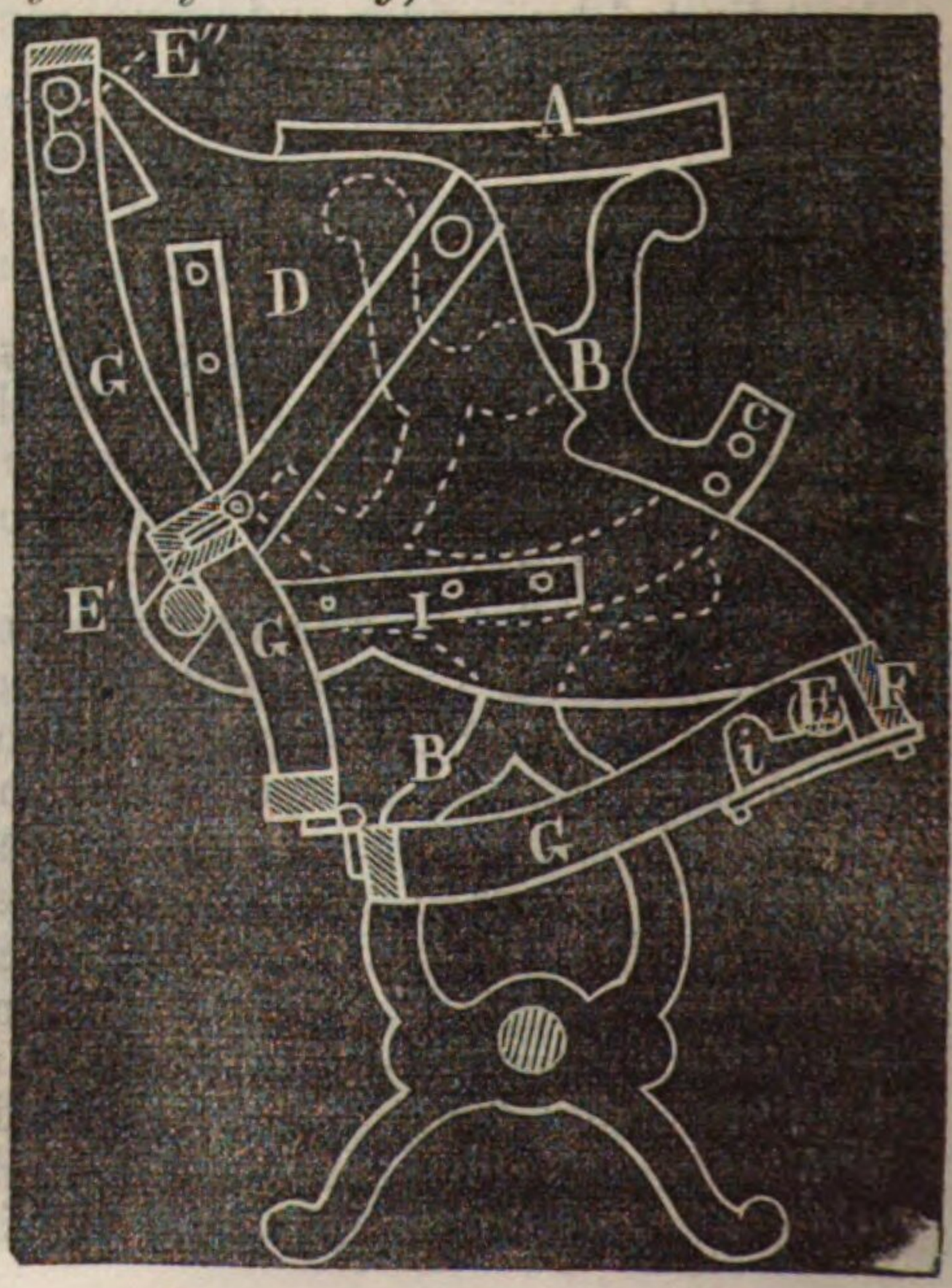
This invention consists in adjustable blades set in the hub of screw propellers, for the purpose of altering the pitch of the screw, and for bringing them to a position to offer no material resistance to the vessel's progress when under sail. A represents the hub; C C the pivots; D D (dotted lines) the adjustable paddles; E pinion; F the slide working the rack H.

Claim.—Arranging the pivots C C of the adjustable blades D D out of the centre of the hub, or at a distance from the axis, and carrying them right through the hub, substantially as described; whereby they obtain a greater depth of bearing without placing one blade behind the other, and thereby rendering it necessary to cut away and weaken the after part of the vessel unnecessarily. Also, the employment of one of the adjustable blades as a rudder in case of need, by means of mechanism.

No. 9,850.—Linus Yale, of Newport, N. Y.—*Improvement in Locks for Banks.*—Patented July 12th, 1853.

Claim.—Impressing the form of the key upon inert tumblers or their equivalents, which shall retain the impression while being separated from the key and beyond reach or influence through the key-hole before they can touch the fence (*for the purpose of preventing any indication of the size and form of the key*).

Also, in combination with inert tumblers the cross bolt D, which takes the strain of end pressure on the main bolt, and acts as a tumbler carriage to convey the tumblers beyond reach or influence through the key-hole when it moves them to the fence out of its locked position with the main bolt.



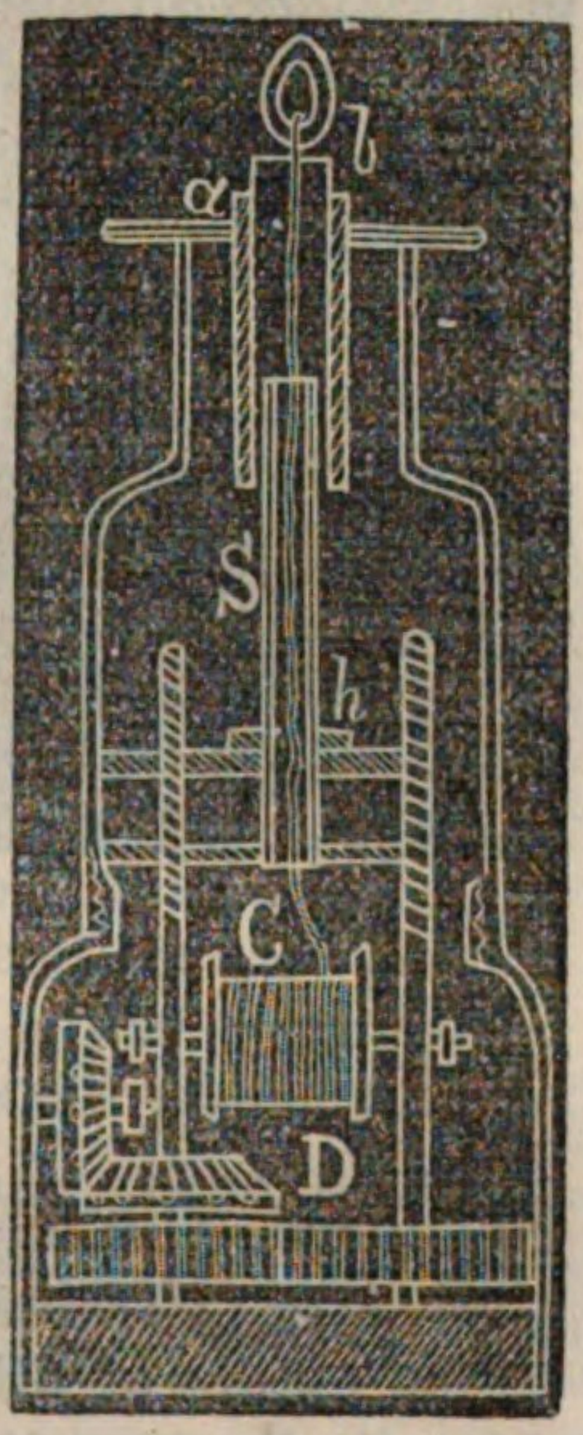
No. 9,851.—Charles P. Bailey, of Zanesville, Ohio.—*Improvement in Railroad Car Seats.*—Patented July 12th, 1853.

By reference to the figure, the claim of the inventor will explain this improvement.

Claim.—Hanging a re-

versable car seat, whose seat when reversed forms a portion of the back, and *vice versâ*; so that it shall occupy the same space after it is reversed that it did before, or hang between, or nearly so, the same parallel lines that it did before reversing; and so, also, that the seat and back may have an adjustment together or independent of each other, whether the seat is divided into two or more parts or not.

No. 9,852.—SAMUEL T. BARNES, of Columbus, Ohio.—*Improvement in Press Mould Candlesticks.*—Patented July 19th, 1853.



The nature of this invention consists in furnishing the press-mould candle-stand with a tube, shown in figure, in the centre of the mould through which the candle is forced by pressure, so as to supply it with a wick through the tube, the wick being drawn from the spool c, attached to the lower part of the press D. s is the stationary wick tube. The tallow, when forced out of the top of the candle tube *a*, will draw the wick off of the spool and up the tube, thus providing the candle with a wick as it is pressed out of the mould, by means of the press plate *h* worked by screws and gearing near D.

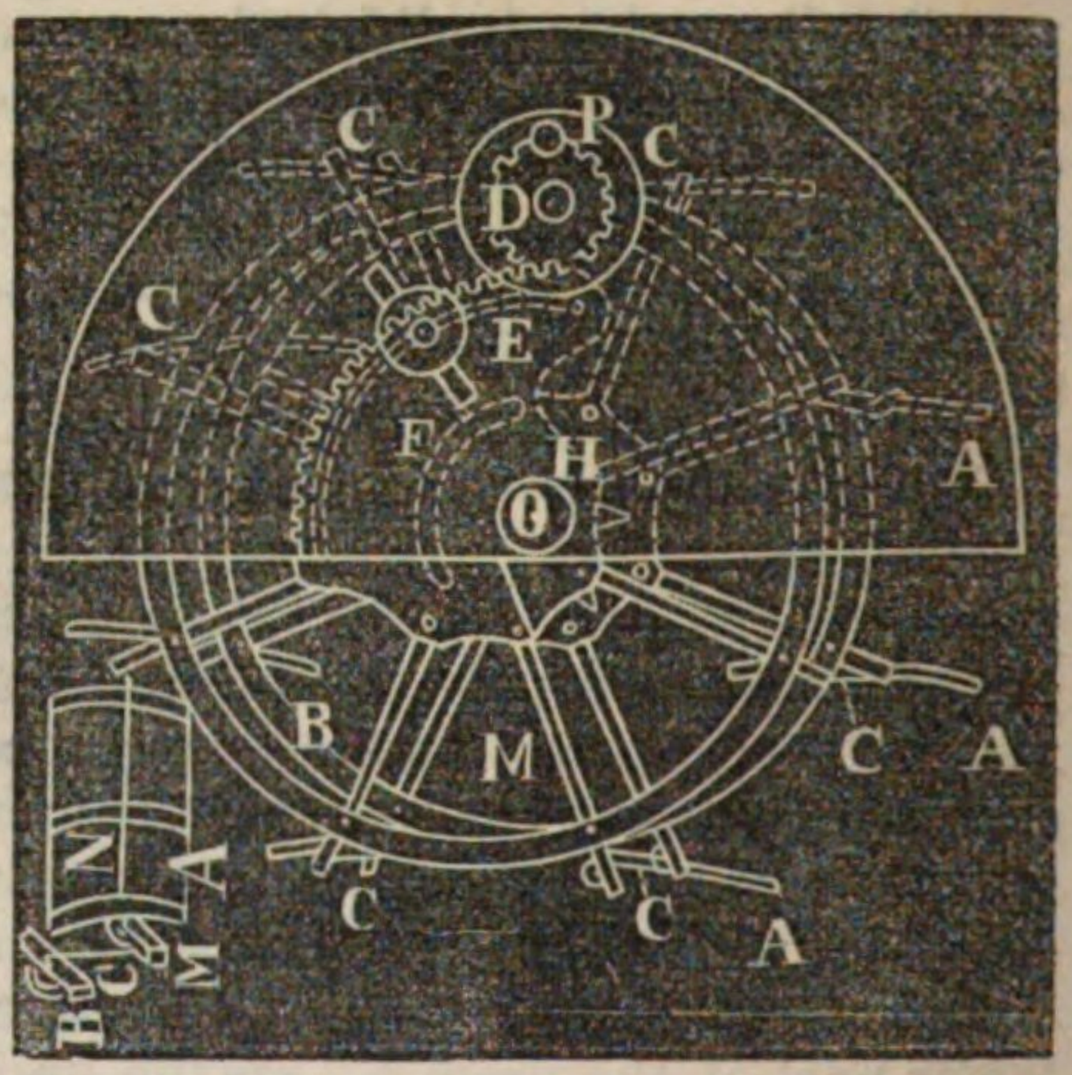
Claim.—The wick tube s to guide and retain the wick in the centre of the candle, in combination with a wick so arranged on a spool as to supply a continuous wick as the tallow is forced out to form the candle.

No. 9,853.—JAMES C. BOOTH, of Philadelphia, Pa.—*Improvement in Process for obtaining Chromates.*—Patented July 19th, 1853.

The nature of this invention consists in reducing the oxide of iron in chrome ore, either wholly or in part, by means of carbon in any of its several forms, or by means of any of its compounds which are or may be employed as fuel, such as carbonic oxide or carburetted hydrogen, as the first stage of the manufacture. Also, in removing the iron so reduced by means of sulphuric acid.

Claim.—The reduction of chrome ore by the carbonaceous materials, as herein described, as a stage in the manufacture of chromate of potash. Also, the process of manufacturing chromate and bi-chromate of potash from chromic iron ore by means of the reduction of the oxide of iron, and the removal of the reduced iron by the several substances and modes substantially as are herein enumerated and set forth. Also, the process of removal and reduction, in connexion with the old process, or in combination with any equivalent therefor.

No. 9,854.—Alexander H. Brown, of Washington City, D. C.—"*Feathering Paddle Wheels.*"—Patented July 19th, 1853.

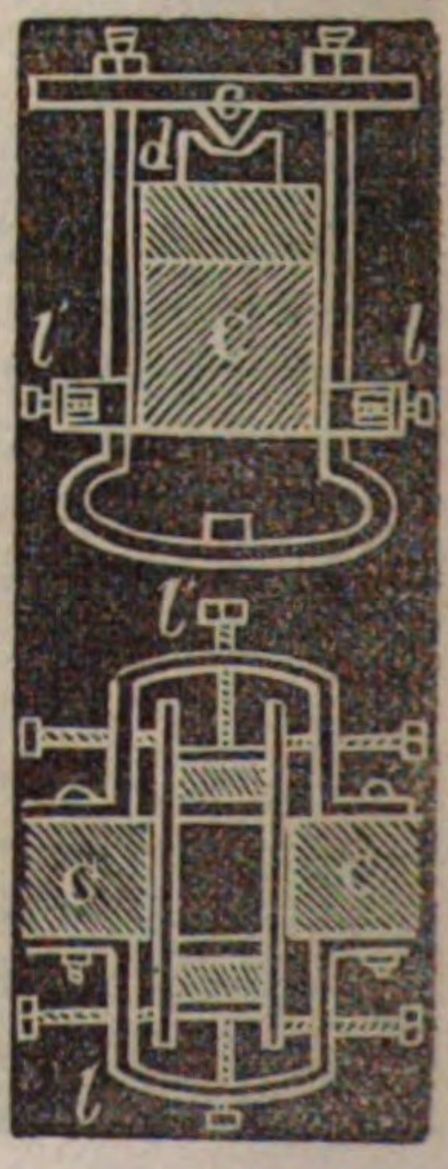


In this improvement, the rack cam E and pinion D with the eccentric F are combined, so that the paddles enter the water at an angle which may be changed with great facility and rapidity. The paddles being rendered adjustable, by thus combining the drum with the pinion and rack, a new means of saving the vessel is thereby obtained in case of accidental loss of the rudder; the arm and paddle adjusting machinery being connected with the steering wheel, they are instantly converted into a steering apparatus, by causing a variation between the two wheels, in the angles at which their paddles enter the water.

Claim.—The combination of the pinion D, rack cam E, and steering drum P with the eccentric F, for the purpose of adjusting the paddles, and converting them into a powerful steering apparatus. Also, the combination of the curved paddle with any apparatus for adjusting and feathering the same.

No. 9,855.—Isaac Brown, of Baltimore, Md.—*Improvement in the Mode of Driving Saws.*—Patented July 19th, 1853.

The nature of this invention consists in so applying the power of steam to the saw gate or frame of a saw mill, as that if the said gate or frame should vibrate laterally, or otherwise run out of line, the defect shall not be communicated to the piston or cylinder, and cut, cramp, or otherwise injure them.



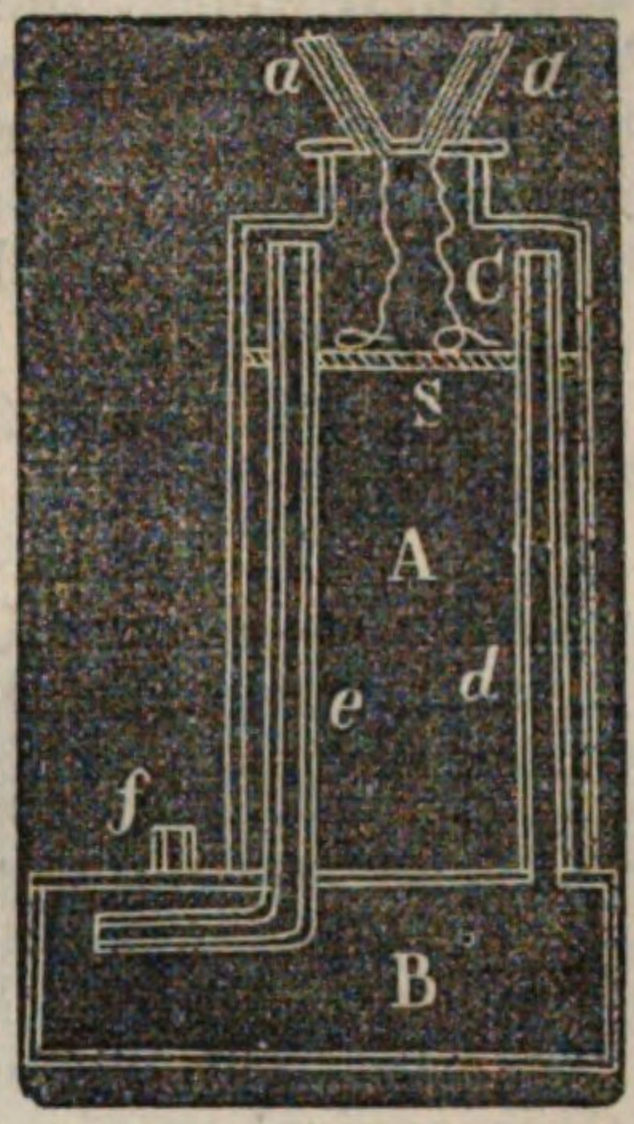
Claim.—The mode of applying the power of the engine to the saw frame or gate, without being permanently connected therewith; so that the piston shall in a great measure be relieved from any lateral motion which the gate may have, which causes it to bind or cut in the cylinder.

No. 9,856.—Nathan T. Coffin, of Knightstown, Ind.—*Improvement in Hanging Mill-Saws.*—Patented July 19th, 1853.

The screws *l l'* are used to regulate the pitch of the saw, which is accomplished with great facility. For instance, small logs require the saw to be more vertical than larger logs. The knife-edge *c* and hollow or grooved plate *d* permit the stirrup to be moved backward or forward without binding or twisting.

Claim.—The combination of the stirrup hung upon a knife edge, with the adjustable screws *l l'* for the purpose of regulating the rake of the saws.

No. 9,857.—CHARLES J. CONWAY, of New York, N. Y.—*Improvement in Lamps.*—Patented July 19th, 1853.



a a are the burners; A the cylinder, divided from the lower part by partition s, and forming the chamber c in which the wicks are placed. The tubes *e d* pass up from the reservoir B into the cylinder at c. The fluid is poured into the reservoir through the tube *f*. The lamp is then held in such a position that the cylinder A gets in horizontal position, in order that the fluid may flow into the wick chamber c through tube *d*, whilst the air escapes through *e*; and thus the chamber c is replenished from time to time.

Claim.—The peculiar construction, by which two chambers are combined in the same lamp, one for the wicks and fluid, and the other the receptacle into which it is poured, and the chambers communicating by means of two pipes, substantially as described.

No. 9,858.—JOHN JACKSON, of Lawrence, Mass.—*Improvement in Spinning-Jacks.*—Patented July 19th, 1853.

The nature of this invention consists in a simple and effectual method of forming the cops and bobbins, and also in an improved method of stripping the spindles preparatory to "winding on" the thread.

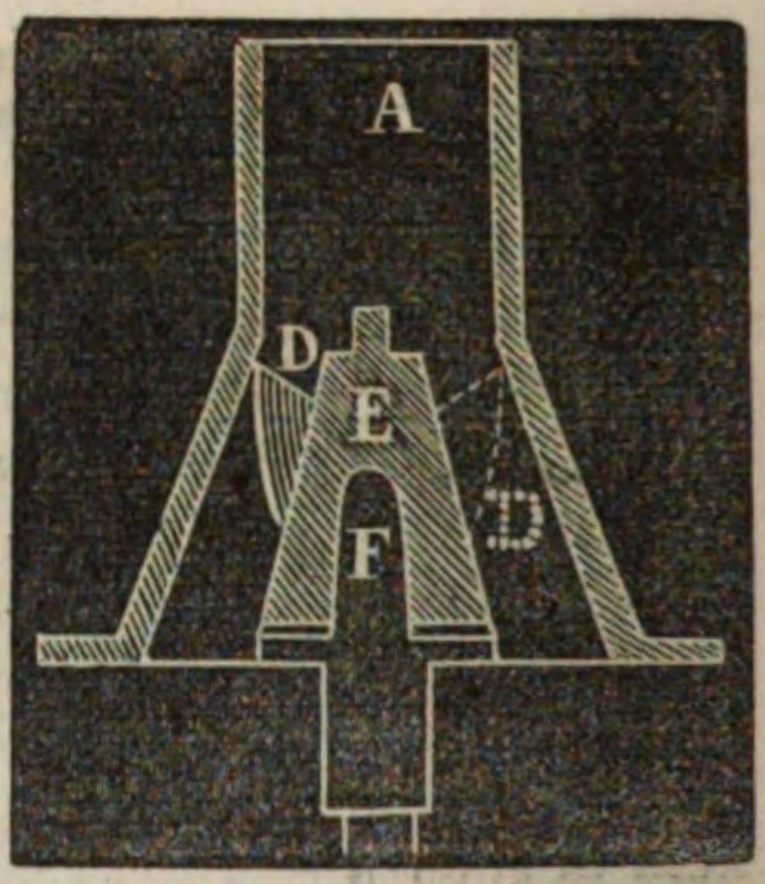
Claim.—The stop R, in combination with the tappet or gear for the purpose of arresting the motion of the latter at the instant the belt is shipped upon the pulley, that the gear may be left in the precise position necessary for the performance of another duty the instant it is again set in motion, without being carried past this position by momentum or otherwise, when the brake R is so arranged in connexion with the lever or otherwise, that it shall be withdrawn by the mechanism which shifts the belt at the instant the gear is set in motion. Also operating the winding on mechanism, raising the stripping wire and depressing the building wire in the proper order, and then shifting the belt on to the fast pulley at the close of these operations, by means of a single cogged gear in combination with the tappet placed upon its side.

No. 9,859.—EDMUND MUNSON, of Utica, N. Y.—*Improvement in Eyes for Mill Stones.*—Patented July 19th, 1853.

This invention consists in so constructing the eye of the stone that the central cone supporting the runner shall be sustained by spiral wings extending from the cone to the inner surface of the eye. These

wings are so constructed as to prevent choking and clogging; and cause a current of air to pass into the eye and between the stones, thus facilitating the feeding of the grain and also supporting the stone.

In the figure, A represents the eye; D D, the spiral wings; these wings fit between the inner periphery or side of the conical portion of the eye and the cone E. F is the spindle.



Claim.—The spiral wings, arranged in such manner as to perform the double office of feeding the grain and supporting the stone.

No. 9,860.—Ralph C. Pratt, of Canandaigua, N. Y.—*Improvement in Machines for Ditching.*—Patented July 19th, 1853.

This invention consists in the construction of an implement of revolving shovels, hung upon a shaft supported by wheels and casing, and performing a cutting and scraping operation, during the progress or revolving of the wheel and beam or shaft.

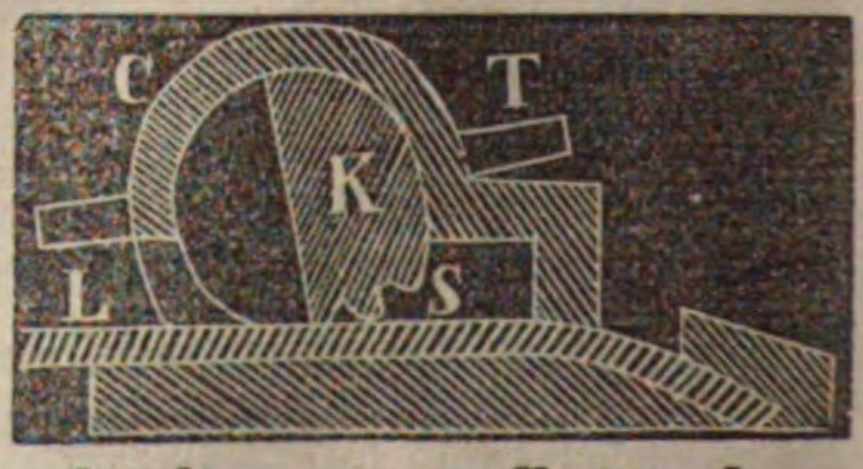
Claim.—The ditching machine consisting of a beam and casing, or their equivalents, in one or more parts, with a cutting and scraping point, hung on the shaft of a revolving wheel, with shovels attached to the outer circle of the wheel, which self-act, by turning the wheel and forming a bucket in connexion with the casing, so as to carry up the earth to the inclined slides.

No. 9,861.—John Farrel, of Philadelphia, Pa.—*Improvement in Lining for Fire-Proof Safes.*—Patented July 19th, 1853.

The nature of this invention consists in the introduction of flour, grain, or other vegetable substances into the space which in such safes is usually filled with non-conducting materials: and hardening the substance thus introduced by lime or cement. The object is to resist the action of heat, or its transmission.

Claim.—The application of the above-named vegetable substances, for the purposes mentioned.

No. 9,862.—Bradford Rowe, of Albany, N. Y.—*Improvement in Gripes for holding Leather.*—Patented July 19th, 1853.



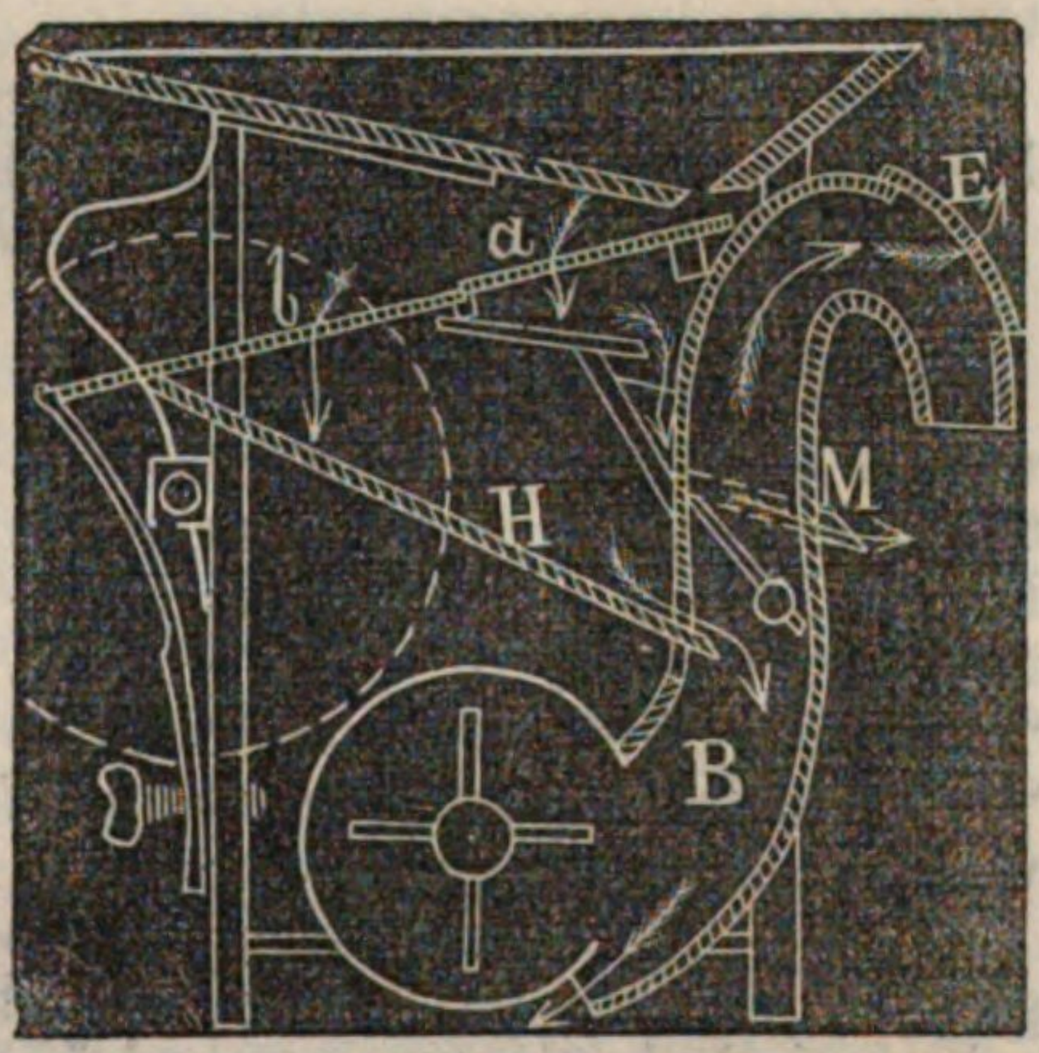
The form and construction of the gripe are shown in the figure: K represents the key, being cylindrical and fitting the bore of the cap C. When the leather L is introduced, the key K is turned from the right to the left by means of a handle T, so as to bring the edge at or near S down upon the leather, firmly; every effort to draw

the leather from the gripe, will tend to turn down the grooved edges of the key more firmly upon it.

Claim.—The construction of a gripe composed of a key turning within a socket or chamber, the key being a solid cylinder with a portion of its surface cut away in two faces parallel with its axis and at an angle with each other; one face being grooved lengthwise, and the chamber being a hollow cylinder with a portion of its space filled up parallel with its axis, and having a longitudinal slit through it for nearly its whole length, corresponding with the cut-away part of the key, so that when the key is in the chamber, a strap of leather or other material can pass through the chamber and under the key.

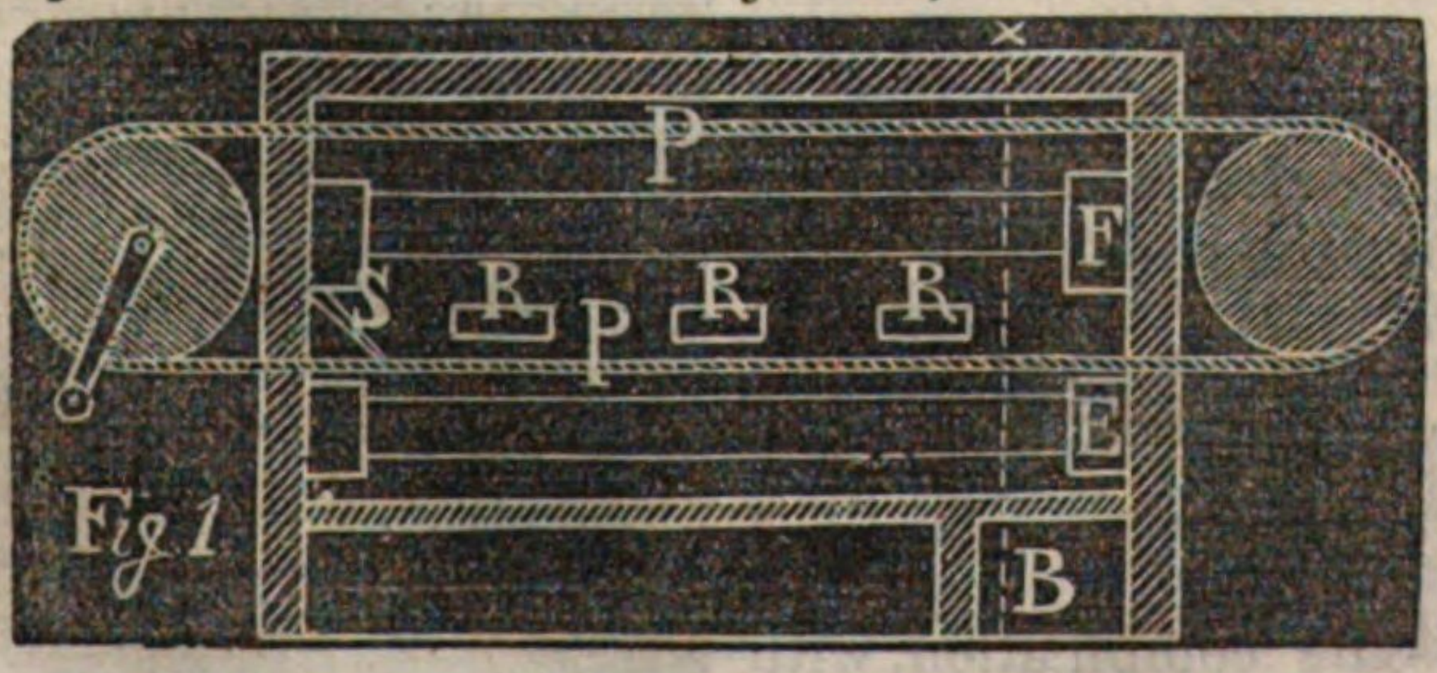
No. 9,863.—GEORGE B. SALMON, of Elmira, N. Y.—*Improvement in Grain Winnowers.*—Patented July 19th, 1853.

The figure and claim explain this improvement.

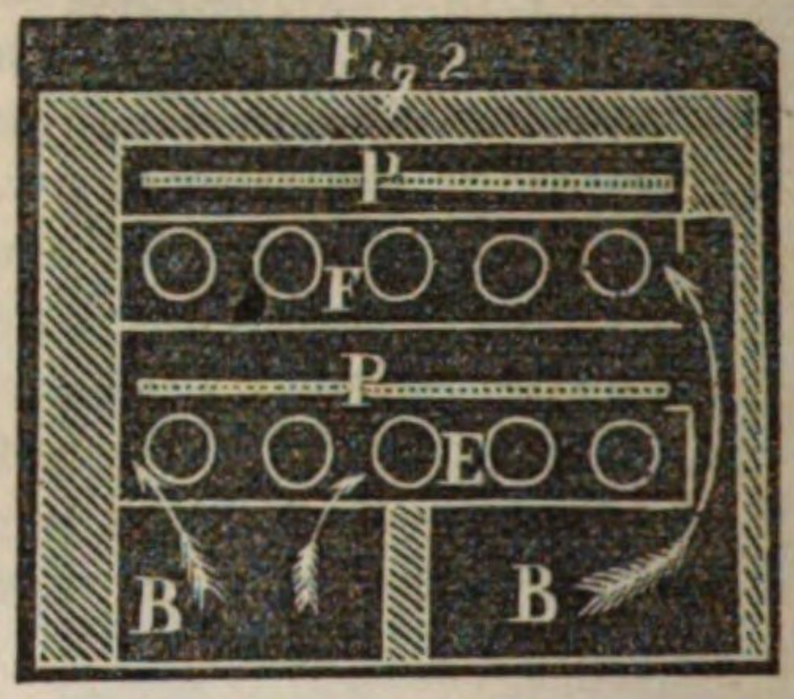


Claim.—The expansion of the upper part of the blast spout B into the circular, irregular, enlarged head, with an opening or mouth at the lower extremity, partly covered with the sieve E for the purpose of allowing the force of the blast to be exhausted, the screenings immediately falling through the opening or mouth of the head, while the blast and dust escape through the screen E, the blast being governed by a slide. Also, the arrangement and construction of the graduated sieve *a b* of unequal fineness; the portion *a* being protected from the action of the fan blast, so that the small substances, such as cockle, &c., passing through and falling on the bottom board of the sieve *a*, pass off at the trough and spouts M M; and when the grain arrives at the coarser part of the sieve *b*, it passes through and is acted upon by the fan blast, while larger substances than wheat pass over the end of the sieve *b* and fall on the floor.

No. 9,864.—EPHRAIM TREADWELL, of New York, N. Y.—*Improvement in Baking Ovens.*—Patented July 19th, 1853.



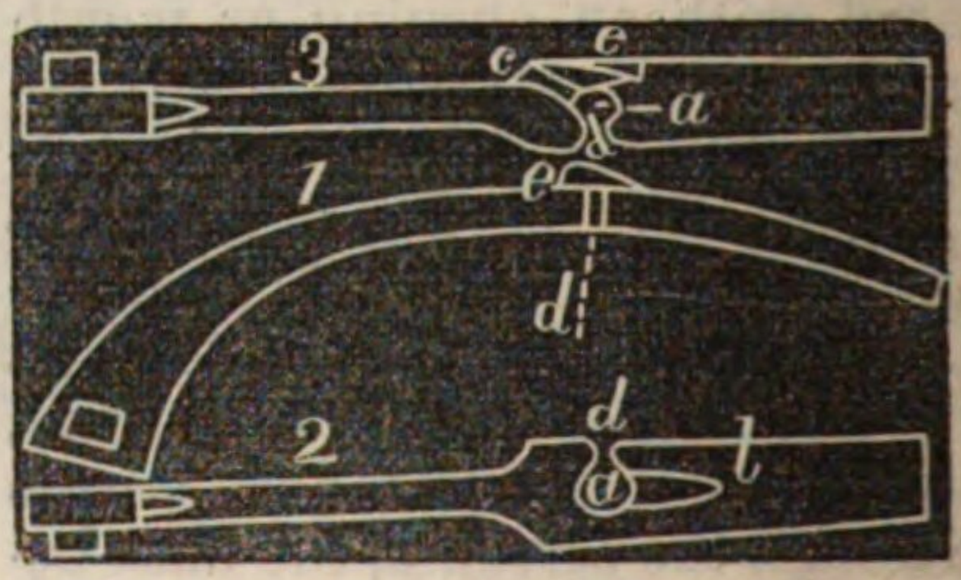
The nature of this invention consists in making a perpetual oven, having side doors in it, for charging and discharging it at intermediate points between the ends of the oven, in combination with lower independent heating flues and furnaces, for directing the entire heat from one set of furnaces through flues on the upper side of the article to be baked, and the entire heat from the other independent set of furnaces through flues on the under side of the article to be baked. The endless belt is for placing the article to be baked upon. B B are the furnaces; E and F heat chambers; P P endless wire-cloth apron; R R R doors; S is a scraper.



Claim.—The oven as above substantially described, with its appurtenances and arrangements.

No. 9,865.—Wm. H. Thompson, and Richard H. Plummer, of Biddeford, Maine.—*Improvement in Compressors for Flyers.*—Patented July 19th, 1853.

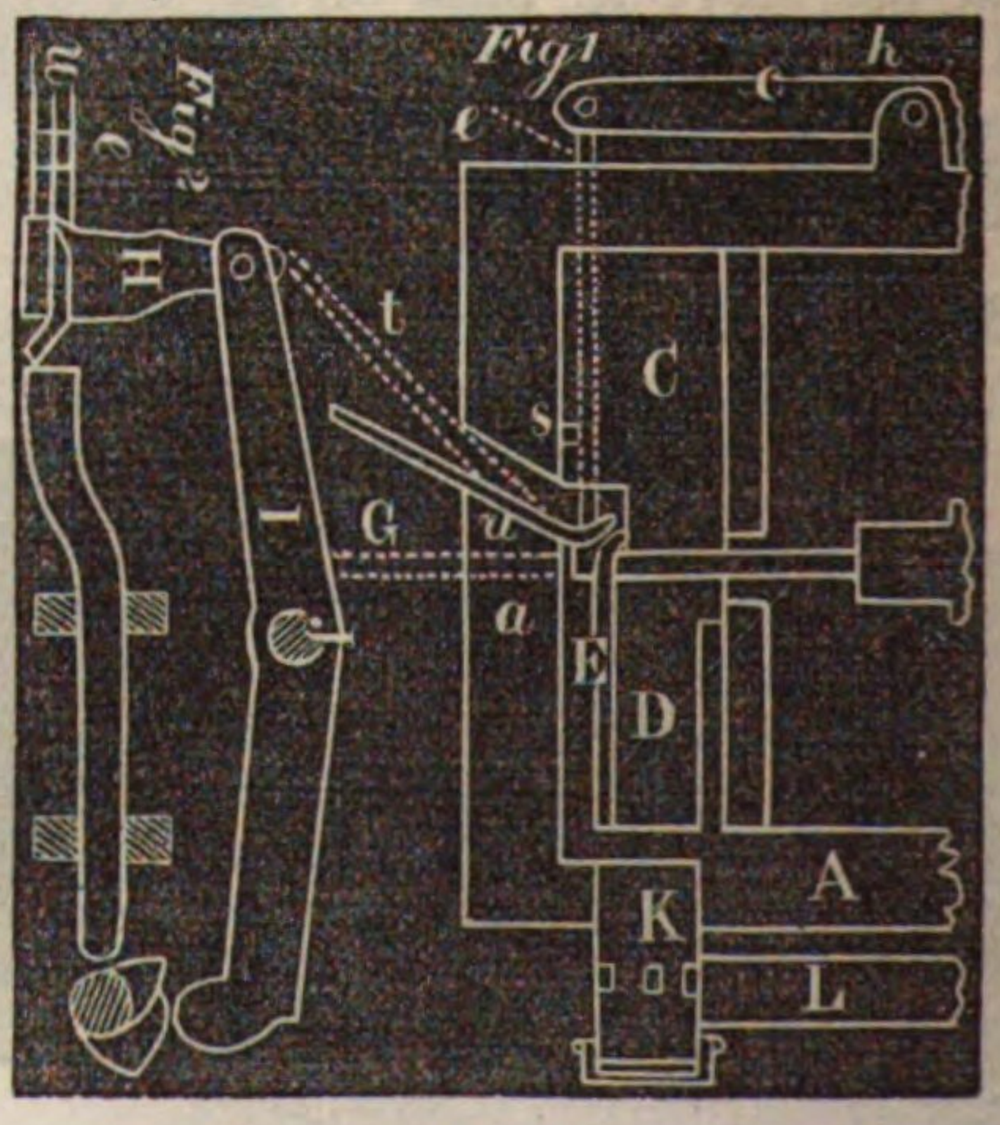
The nature of this invention consists in adapting the compressor to the speeder flyer, and to work on a bobbin having two heads, to facilitate the winding of the roving, "and thus gain" (says the inventor) "one hundred and fifty per cent. of wind on each bobbin."



Claim.—The combination of the guard rib *e* with the hole *a*, and the passage *b*, and the opening *d*, substantially in the manner and for the purpose as specified.

No. 9,866.—Philip P. Trayser, of Baltimore, Md.—*Improvement in Spike Machines.*—Patented July 19th, 1853.

C is the stationary portion of the griping and shaping die; D is the movable portion of the griping die, and carries with it the knife E, which severs the rod *u*, and a stump or projection *a* which aids the bending of the rod; G is the groove in the end of the frame through which the rod is passed to the dies; H is the pointing die, and I the lever which operates it; J, rock shaft and fulcrum of lever I; K is the toggle lever by which the die D is worked; L the lever by which K is actuated.



Claim.—The combination, with

the knife which severs the blank from the rod, of two stumps, either or both moving, whereby, while one blank is being headed and pointed in the dies, the end of the rod for the next blank is cut off and bent preparatory to forming a head.

Also, the method of heading spikes by bending the end of the rod preparatory to upsetting, before placing it in contact with the dies; whereby the heated rod is kept a shorter time in contact with the dies, and therefore heats them less, while at the same time it is not detained longer than usual out of the dies: so that by this method the dies are better protected from excessive heating, the rod from cooling, and the whole operation expedited and improved.

No. 9,867.—Sylvester J. Sherman, of New York, N. Y.—*Improvement in Mounting Spirit Levels.*—Patented July 19th, 1853.

This improvement consists in providing a spring catch *b*, for spirit levels, and bearers or projections *a a*, to attach or place the level upon a square, or ruler, or levelling instrument.

Claim.—The spring catch to hold the level in place upon the square or ruler, in combination with the bearers; the latter being so formed in respect to the level, that when they are placed upon a horizontal line, the bubble will be in the middle of the glass, and thus a horizontal or vertical line may be ascertained from a ruler, or from a square, when the level is attached.

No. 9,868.—Thomas C. Weildon, of Hartford, Conn.—*Improvement in the Manufacture of Wigs.*—Patented July 19th, 1853.

The nature of this invention consists in the method of fastening the hair with a gluten to the network of wigs, &c.

Claim.—The method of fastening and attaching the hair to wigs, toupees, or any other kind of hair work, by means of any kind of glutinous substance.

No. 9,869.—Charles Williams, of Philadelphia, Pa.—*Improvement in the Preparation of Bristles for Brushes.*—Patented July 19th, 1853.

The ferrule which confines the bristles is drawn over about two thirds or three fourths the length of the bristles from the flag end (that being smaller than the root), and then submitted to the action of heat, by being placed (with the root down) upon the top of a boiler heated by steam. The heat displaces the moisture from the roots, "and contracts them in a remarkable degree," so as to enable the operator to draw the bristles with ease to their proper place within the band or ferrule.

Claim.—In the manufacture of that class of brushes known as "drove work," preparing the bristles by the application of heat to the roots, substantially in the manner and for the purpose described.

No. 9,870.—Leonardo Westbrook, of New York, N. Y.—*Improvement in Gutta-Percha Stereotype Composition.*—Patented July 19th, 1853.

The nature of this improvement consists in a substitute for type metal, for the purpose of stereotyping, composed of shellac and plumbago, or graphite, of each three parts, to which is added one part of asphaltum; these are melted and mixed together, and 13 parts of crude gutta percha are cut into shreds, and ground with the other articles. A solution of one pound of the sulphate of copper in one gallon of water is then taken to cover the mass, after being heated about 212° Fahr.; the solution is applied through a tube in a regular stream while the ingredients are being ground.

Claim.—The compound herein described, of shellac, plumbago, or graphite, asphaltum, and gutta percha, treated by sulphate of copper and water, as a substitute for type metal.

No. 9,871.—Austin O. Willcox, of Philadelphia, Pa.—*Improvement in Air Engines.*—Patented July 19th, 1853.

The nature of this invention consists in the employment of interchanging circulators G G, and H H, which are situated within, and occupy one half the capacity of each heat-reversing vessel B C.

Claim.—The interchanging circulators G G and H H (fig. 1), so arranged as to alternately transfer the air or other fluid to the heating and cooling divisions of the vessels, in the same movement, to cause the air to pass through renovating plates z z &c., or their equivalents, whether placed within the circulators, and

Fig 1

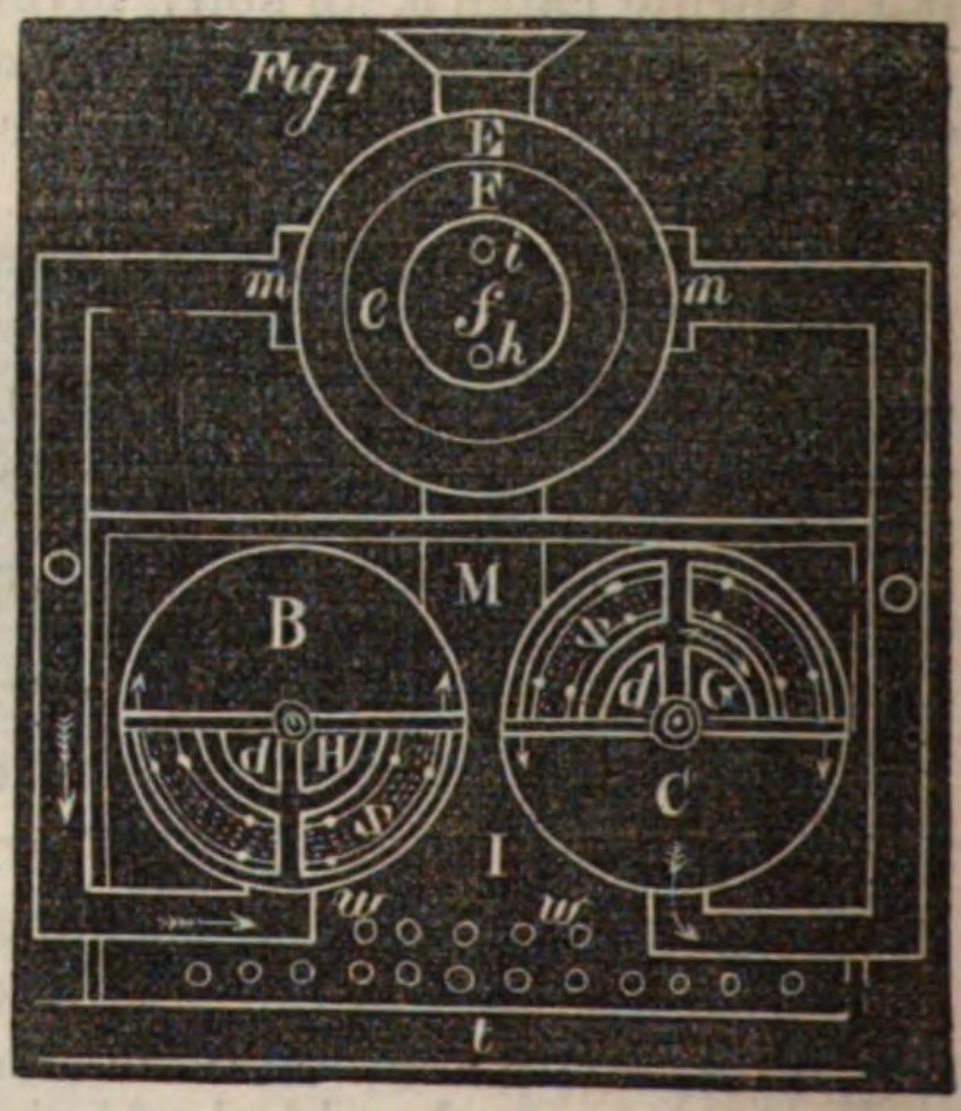
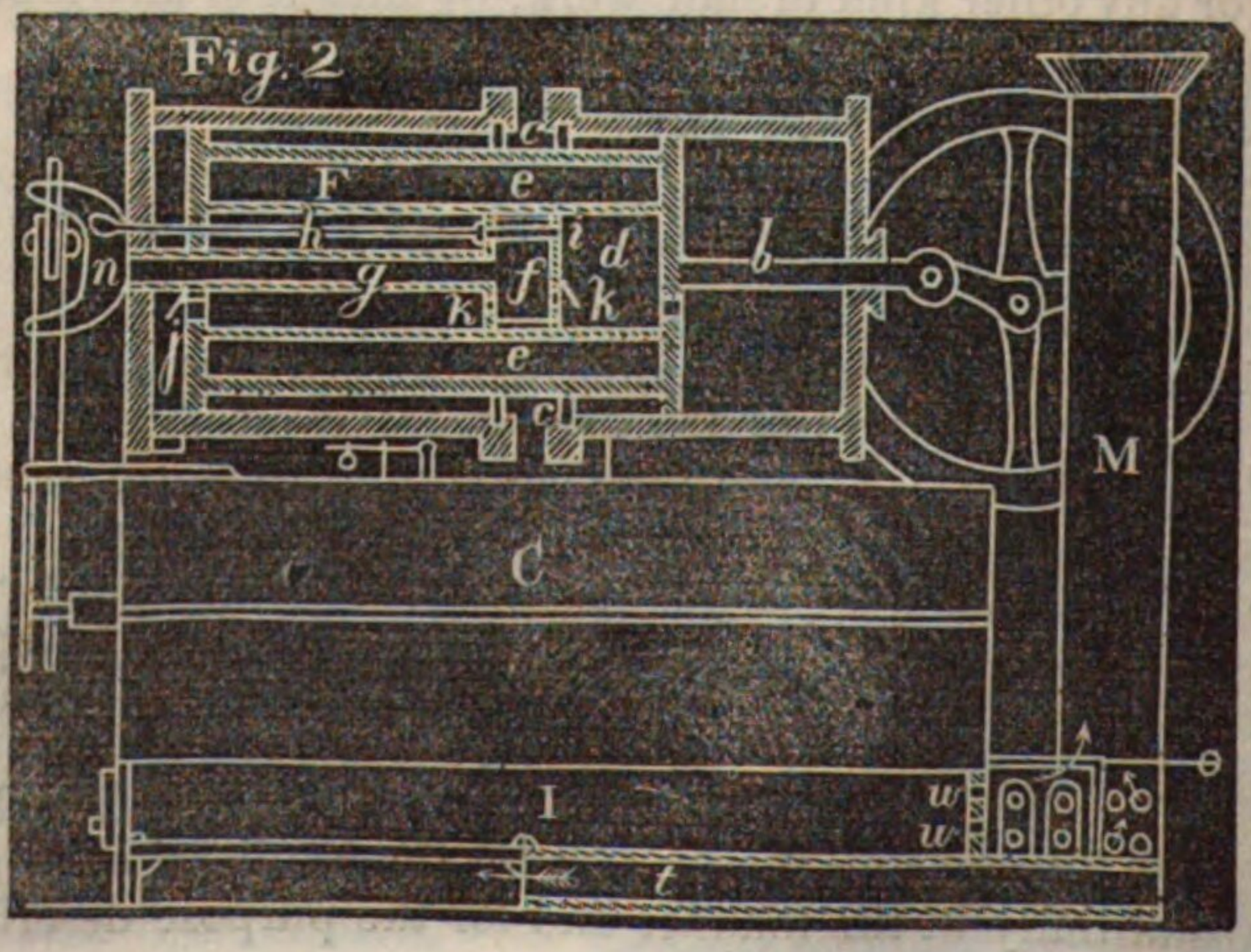


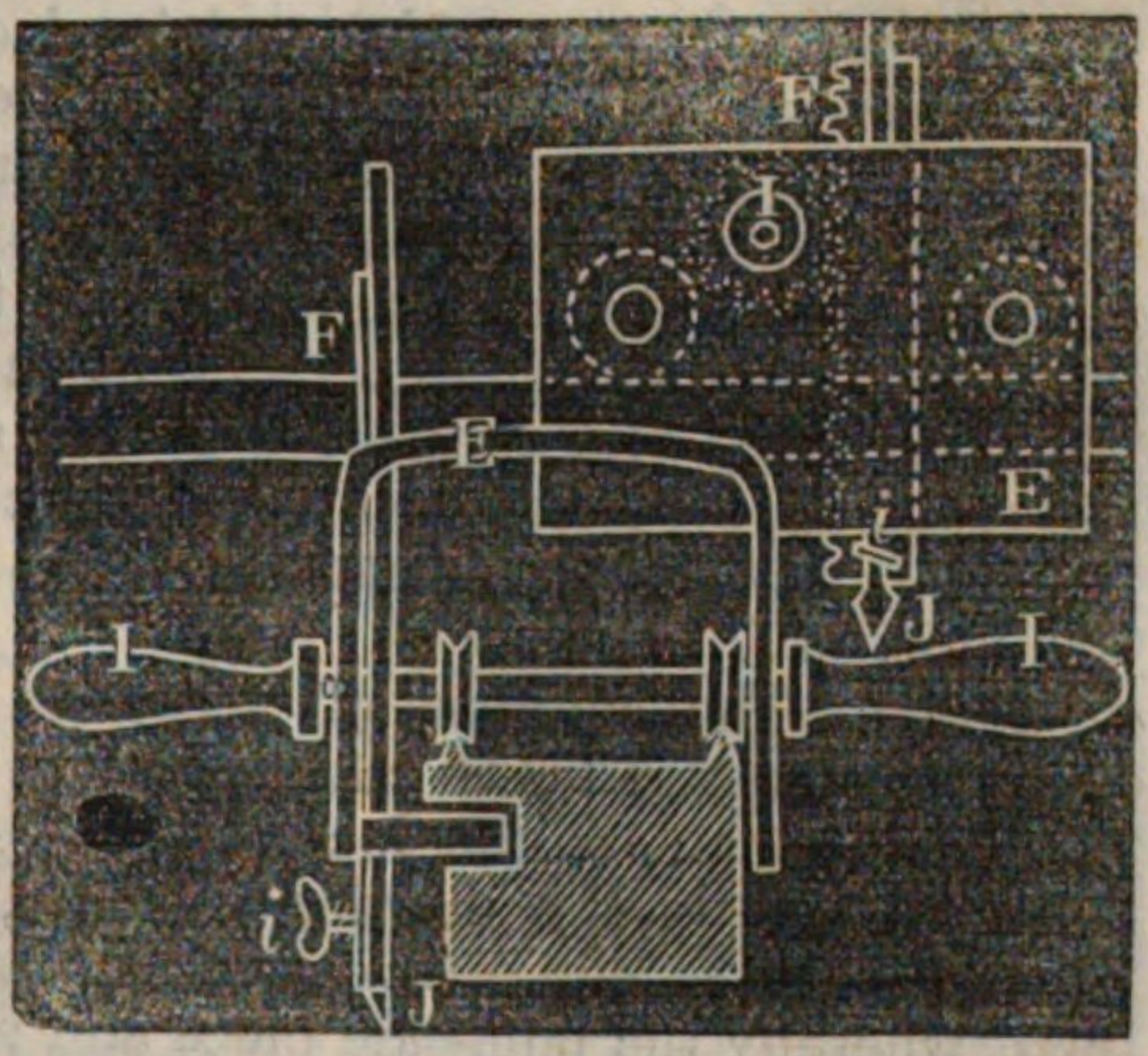
Fig. 2



transmitting the air, or placed without the circulators, and the air forced through them.

Also, placing an inwardly-pressing packing *c* (fig. 2), in the open end of each working cylinder; and in combination therewith, the construction of the working piston of a little less diameter than the interior of the cylinders, whereby the friction surface is confined to the periphery of the piston, in order to sufficiently exclude its lubricating fluid from the contact of the hot air within the cylinders. Also, the barrel *d*, and stationary hollow piston *f*, with its supply-tube *g*, aperture *i*, valves *h* and *k k*, in combination with the working piston *f*, and its valves *j j*, for the purpose of supplying air or other fluid to the cylinders when desired.

No. 9,872.—Frederick Hesse, of Bethlehem, Pa.—*Improvement in Paper-Cutting Machines.*—Patented July 19th, 1853.



The nature of this invention consists in having an adjustable knife or cutter J, placed within a sliding stock E, and so arranged that the knife or cutter may be regulated to cut the required depth, by merely turning the handles I I, by which the sliding stock is moved upon the bed.

Claim. — Cutting paper, pasteboard, or other articles, by means of the knife J, attached to the rack-bar F, which mashes into a pinion G, the pinion being hung or attached to a spindle or shaft, to the ends of which the handles I I of the sliding stock E are secured, the above parts being attached to the sliding stock E; by which device the knife may be elevated or depressed, as desired by the operator, while working the sliding stock upon the bed piece.

No. 9,873.—Cyrus C. Bisbee, of Rochester, N. Y.—*Improvement in Shower-bath Tables.*—Patented July 26th, 1853.

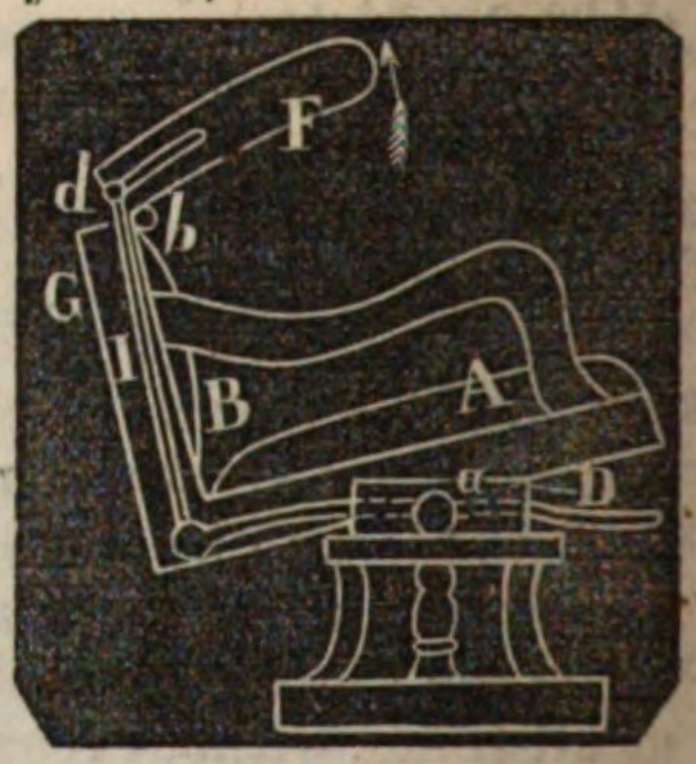
This improvement consists in constructing a shower-bath in such manner, that when not in actual use as a bath, it may be converted into a table. The four legs are made tubular to receive elongating standards, which can be elevated by means of racks and pinions with the shower tray, which is placed under the leaf of the table. The lower tray, which is also under the leaf of the table, can be let down when to be used.

Claim.—The combination and arrangement of the upper and lower tray, so that they shall simultaneously recede from each other to elevate the water and set up the bath, and approach each other to pack away the bath and convert the apparatus into a table.

without affecting the wheels or the other shaft. In the same line with wheels F are placed, back of the hopper, the covering wheels H, that work in brackets projecting from a swinging frame K, which is jointed in the middle, so as to admit of vertical play. The wheels have a deep angular groove on their peripheries.

Claim.—The arrangement of the drill and covering wheels, or their equivalents, on flexible axles, so that they will rise and fall to accommodate themselves to undulating ground, whereby the grain in all the furrows is planted at an equal depth and equally covered.

No. 9,880.—William M. Warren, of Watertown, Conn.—*Improvement in Railroad Car Seats.*—Patented July 26th, 1853.



In this improved car seat, the hinged back is raised and presses against the stationary back in such a manner that the seat will be inclined. The hinge or joint *d* in the metal strip I is rather above the hinges *b b*, and therefore by raising the adjustable back, the line of the hinge *d* being the line of fulcrum, the hinges bear downwards upon the top of the stationary back B; and as the seat A is hung on pivots, *a a*, the seat will of course be inclined. By depressing the adjustable back F, the hinges elevate the seat, and bring it to a horizontal position. The cross piece D turns, and the seat may be turned in any direction in which the cars go.

Claim.—Attaching the hinged or adjustable back F to the stationary back B, by means of the hinges *b b*, and having a jointed or hinged metal strip I, secured to the adjustable back and to the cross-piece D, the hinge or joint D of the metal strip being above the line of the hinges; by which arrangement the seat A is inclined, or brought to a horizontal position, as the adjustable back is raised or depressed.

No. 9,881.—Ezra R. Benton, of Cleveland, Ohio.—*Improvement in Bran Dusters.*—Patented July 26th, 1853.

The nature of this improvement consists in the arrangement of the feeding apparatus, in such a manner that the bran is fed into the machine by an inward current of air, which at the same time permits all heavy substances to fall into a spout and be excluded; also, in the use of inwardly acting blasts of different degrees of strength, at the top and bottom of the duster, to feed the bran in and drive the flour out through the inclosing sieve by the upper blast, while the lower blast or current only counteracts the downward pressure of the upper blast, so as to prevent discharging any flour with the bran; also, in the arrangement of teeth, in lines ascending in the direction opposite to its motion around the revolving cylinder, in such a manner that their action by the revolution of the cylinder tends to lift the bran, or to prevent its falling too rapidly to the bottom.

Claim.—The inventor claims the two draughts of air, produced by oblique fans, as proportioned in strength of blasts, for the purposes substantially as above described and set forth.

No. 9,882.—Jacob H. Carothers, of Davidsburg, Pa.—*Improvement in Corn Planters.*—Patented July 26th, 1853.

The nature of this improvement consists in suspending the planting at any time by grappling the periphery of the wheel by two hooked levers, which are worked by means of a rod behind the hopper, and placed conveniently at the command of the operator.

Claim.—The method of stopping the seeding apparatus by grappling the periphery of the driving wheel.

No. 9,883.—Sylvester Davis, of Claremont, N. H.—*Improvement in Bee Hives.*—Patented July 26th, 1853.

The object of this improvement is to provide (by series of slats placed over the bee food in the feed drawer) means for the bees to stand on while feeding, and thus prevent the bees from being mired in the food.

Claim.—The manner of constructing the float K, or N, of two parallel series of slightly separated thin slats, placed one directly over the other, and separated by two or three cross slats, and supported by similar cross slats beneath the whole, for the purpose of allowing the bees to feed without being liable to be mired in the food beneath.

No. 9,884.—Ziba Durkee, of Alden, N. Y.—*Improvement in the Beaters of Smut Machines.*—Patented July 26th, 1853.

The nature of this improvement consists in covering the revolving cylinders, beaters, or wings of any ordinary construction with wire netting or cloth, by which means a uniform uneven but smooth surface is preserved, which has great durability, and can be renewed at a trifling expense when worn away, and performs the work thoroughly.

Claim.—The claim is substantially embraced in the above description.

No. 9,885.—F. O. Deschamps, of Philadelphia, Pa.—*Improvement in Omnibus Lanterns.*—Patented July 26th, 1853.

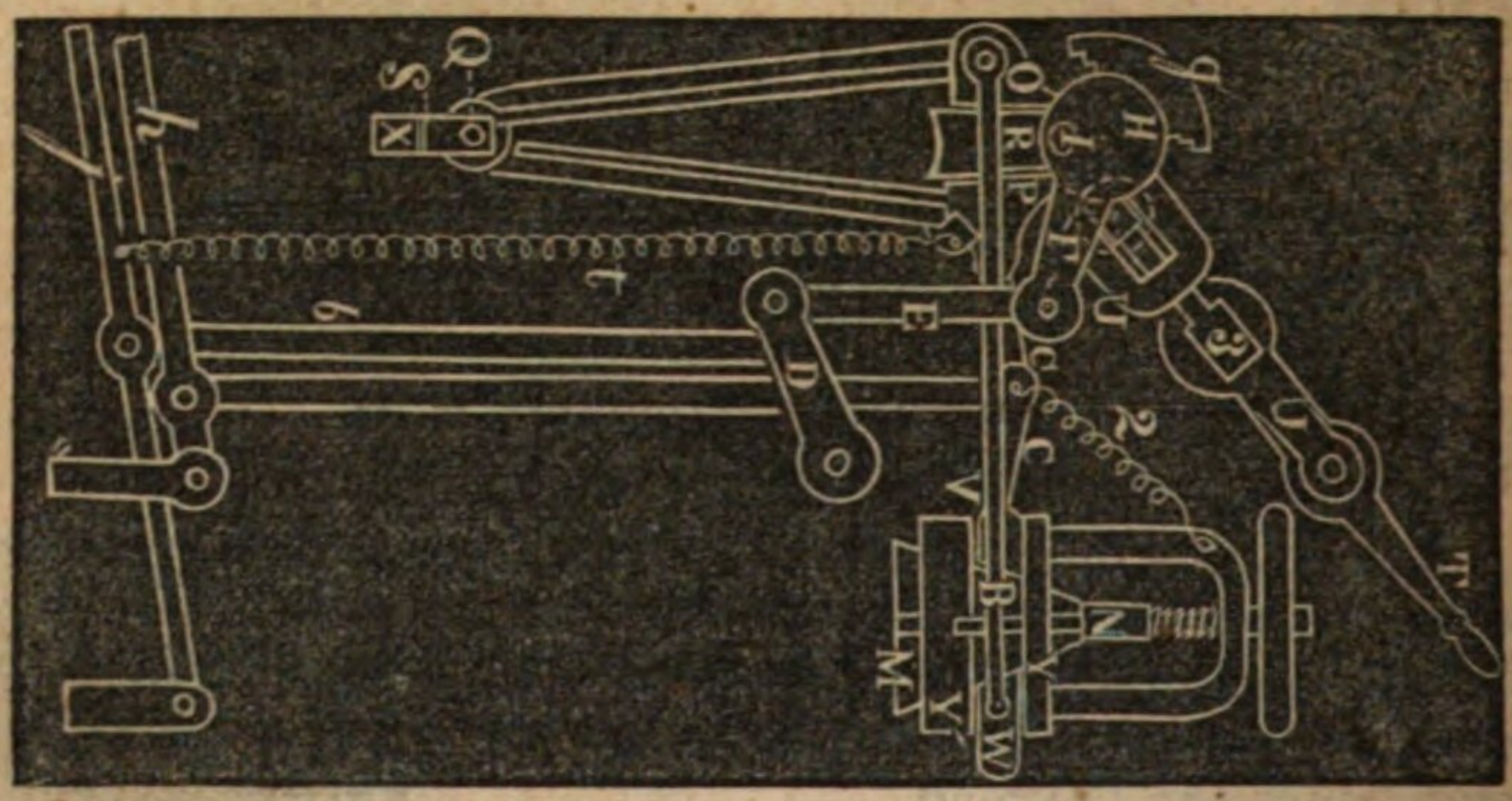
This invention consists in placing the lamp within a case, the lower part of which is formed of glass, and the upper part of a metal cap, in which cap is placed a lens. The case is intended to be inserted in the top of the omnibus or stage, immediately behind the seat of the driver; the glass portion being below the roof, and within the omnibus or stage, and the cap containing the lens above the top or roof. By this arrangement the omnibus is lighted inside, and at the same time light is afforded for the driver on the outside, or roof.

Claim.—Substantially, the above described lamp and its peculiar arrangement.

No. 9,886.—John A. Elder, of Westbrook, Me.—*Improvement in Machines for Backing Books.*—Patented July 26th, 1853.

This invention is designed to take the place of the common mode of hammering the backs of books, to prepare them after they have been

glued for the reception of the covers, and to economize time, and perform the work in a "more perfect" manner than it has heretofore been done.



Claim.—First, hanging the frame carrying the pressure rollers K upon, and eccentrically to, the centre of motion of the arms F, so that the centre of motion of the frame can be raised at pleasure. Secondly, the combination of the wedge M, and bars W and V, when connected with the jaws of the clamps, for the purpose of keeping the centre of the book, whatever its thickness, vertical with the bearings G of the swinging frame U.

No. 9,887.—DANIEL B. HINMAN, of Philadelphia, Pa.—*Improvement in Dyeing Yarn Parti-colored.*—Patented July 26th, 1853.

The nature of this invention consists in pressing the yarn between series of separate and adjustable or changeable bars of hard wood, whose pressing faces are parallel to each other, in such parts and for such distances as are not intended to be dyed, while the parts of the yarn intended to be dyed remain, without being pressed, between and beyond the sides of the bars.

Claim.—The employment of series of separate and adjustable or changeable bars, one above the other, in an adjustable press, and pressing between their faces the parts of the yarn not intended to be dyed, while the liquor is in contact with, and dyes the parts of the yarn between the sides of the bars.

No. 9,888.—LEVI PITMAN, of Tom's Brook, Va.—*Improved Plotting Theodolite.*—Patented July 26th, 1853.

This improvement consists in arranging a traversing scale over the dial, adjusted and connected to a sliding frame under the dial, upon which a piece of paper is fastened to mark the plot upon and rule a line by the traversing scale and note the course; so that when the instrument is taken to the position sighted to, and the distance measured, it can be marked upon the line and the point measured upon the paper by the traversing scale, which is then moved back and the needle box replaced, and the next point sighted to, and the needle box removed, and the line and course marked. Also,

in applying an adjustable index to the traversing scale, so as to measure minute divisions accurately.

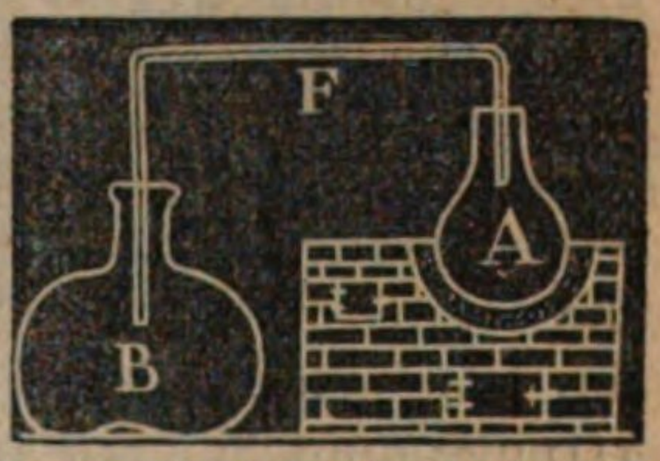
Claim.—The adjusting index or its equivalent, in combination with the graduated scale upon the traversing ruler and the horizontal dial. Also, the dial described, fixed upon a staff or socket, in combination with the revolving frame, and turning under the dial on the socket carrying the traversing ruler K, and a suitable sight vane.

No. 9,889.—J. A. RAPP and E. S. WRIGHT, of Buffalo, N. Y.—*Improvement in Straining Saws without a Gate.*—Patented July 26th, 1853.

The nature of this invention consists in the application of compressed air, so applied to piston heads working in cylinders at each end of saws, and to which heads the saw is connected by its ends by rods, as that the tendency of the compressed air to push or pull apart the piston heads shall be exerted to the straining of the saw, and thus keep it perfectly strained without the use of a gate.

Claim.—The application of compressed air to the straining cylinders of saws, when the cylinders are so connected with each other, that the compressed air shall alternately pass from one cylinder to the other during the reciprocating action of the saw, and combined with the air pump and pressure valve, for the purpose of regulating and maintaining the intensity of the strain on the saw.

No. 9,890.—FREDERICK G. VETTERCKE, of New York, N. Y.—*Improved Compound for Dyeing.*—Patented July 26th, 1853.



To form this compound, 10 pounds of sulphuric acid are mixed with 4 pounds of cold water, and let stand six hours:—Four pounds of prussiate of potash are placed in the receiver B, with three gallons of boiling water; and in retort A five pounds of manganese, and four pounds of common salt, to which is added the mixture first mentioned: the pipe F is adjusted and luted, and the whole is left quiet for six hours. After that time a slow fire is applied and kept up for six hours longer, during which time the chloride formed in the retort A will pass over into the receiver B, which is then taken off and hermetically sealed, and the compound is ready for use. To use this compound, a mixture of sulphuric acid and water is prepared in a retort similar to A; in another receiver are put eight pounds of salts of tin, and two pounds of tartaric acid, and three gallons of boiling water: this mixture undergoes the same management as the 'kali compound' above mentioned, and produces 'chloride of tin.' To six pounds of the first or kali compound are added two pounds of sulphuric acid, the whole mixed with about 100 gallons of water in a dye kettle, and heated to 212° Fahr.; the wool is let remain therein three fourths of an hour, which gives it a green or ground color. To the same kettle of dye are added three pounds of kali compound and two pounds of vitriol, and the whole heated to 200° Fahr.; the wool is then put in and let remain three fourths of an hour. In this manner are

produced an endless variety of shades by slight changes of the proportions of the ingredients and the degree of heat.

Claim.—Making the kali compound, substantially as herein set forth, as a basis for a blue dye.

No. 9,891.—HENRY LEE NORRIS, of New York City.—*Improvement in preserving India Rubber in a Liquid State.*—Patented July 26th, 1853.

The nature of this invention consists in treating the juice or milk from the caoutchouc or India rubber tree, so as to form a compound that will remain liquid, and be prevented from fermentation, acidulation, coagulation, or putridity. The inventor accomplishes this by mixing with the juice, within three hours after it is drawn from the tree and strained, concentrated liquor of ammonia—to every pound of the juice one ounce of the liquid. This compound when placed in air-tight vessels can be preserved for a long time, and when poured upon a polished surface and left to evaporate slowly, it forms a very elastic, tough, and transparent article.

Claim.—The compound above described, and for the purposes therein set forth.

No. 9,892.—JAMES A. BAZIN, of Canton, Mass.—*Improvement in Seraphines and other Reed Instruments of Music.*—Patented August 2nd, 1853.

A description of this invention would be too lengthy for this Report.

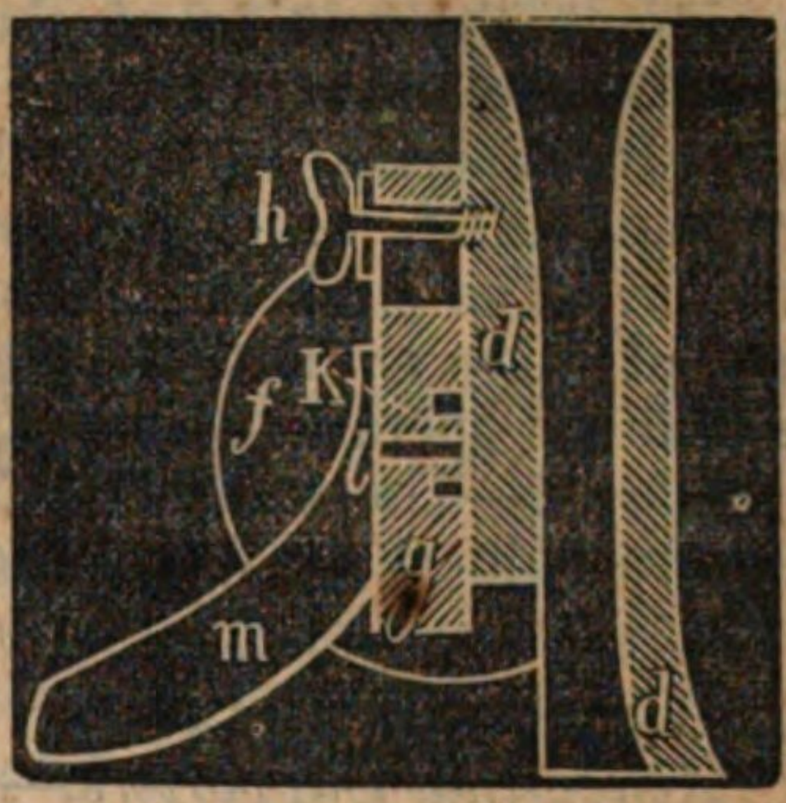
Claim.—Flatting the thirds, sixths, and sevenths, of the scale, by means of the regulating cylinder. Also, the valve of two parts, with the springs, in combination with the perforated plate for the purpose of sounding the note flat or sharp. Also, the combination and arrangement of the sliding bar, the buttons, the bent wires, and the pins, for the purpose of unlocking the key board. Also, the use of two or more wind chests in the same instrument, for the purposes separately of the bass and treble notes. Also, the peculiar arrangement of the bellows and wind chests. Also, hanging the pedal with a movable fulcrum, to prevent friction upon the foot. Also, the construction of the air passages, and their arrangement. Also, the pressed bar, so constructed and arranged as to keep down the rear portion of all the valves, while their front portion is left free to be operated by the keys, thereby modifying the tone of all the notes of the instrument.

No. 9,893.—GEORGE W. BROWN, of Tylersville, Ill.—*Improvement in Seed Planters.*—Patented August 2nd, 1853.

The claim embraces the object of this improvement.

Claim.—The oscillating horizontal wheels, or distributers, in the bottom of the hoppers, having slots and holes of various sizes, in combination with stationary caps and pins, for the discharge of different kinds and quantities of seeds. Also, the arrangement of the covering roliers, mounted as described, and performing the purpose of covering the seed, elevating the cutters in turning around, and in adjusting them to different depths.

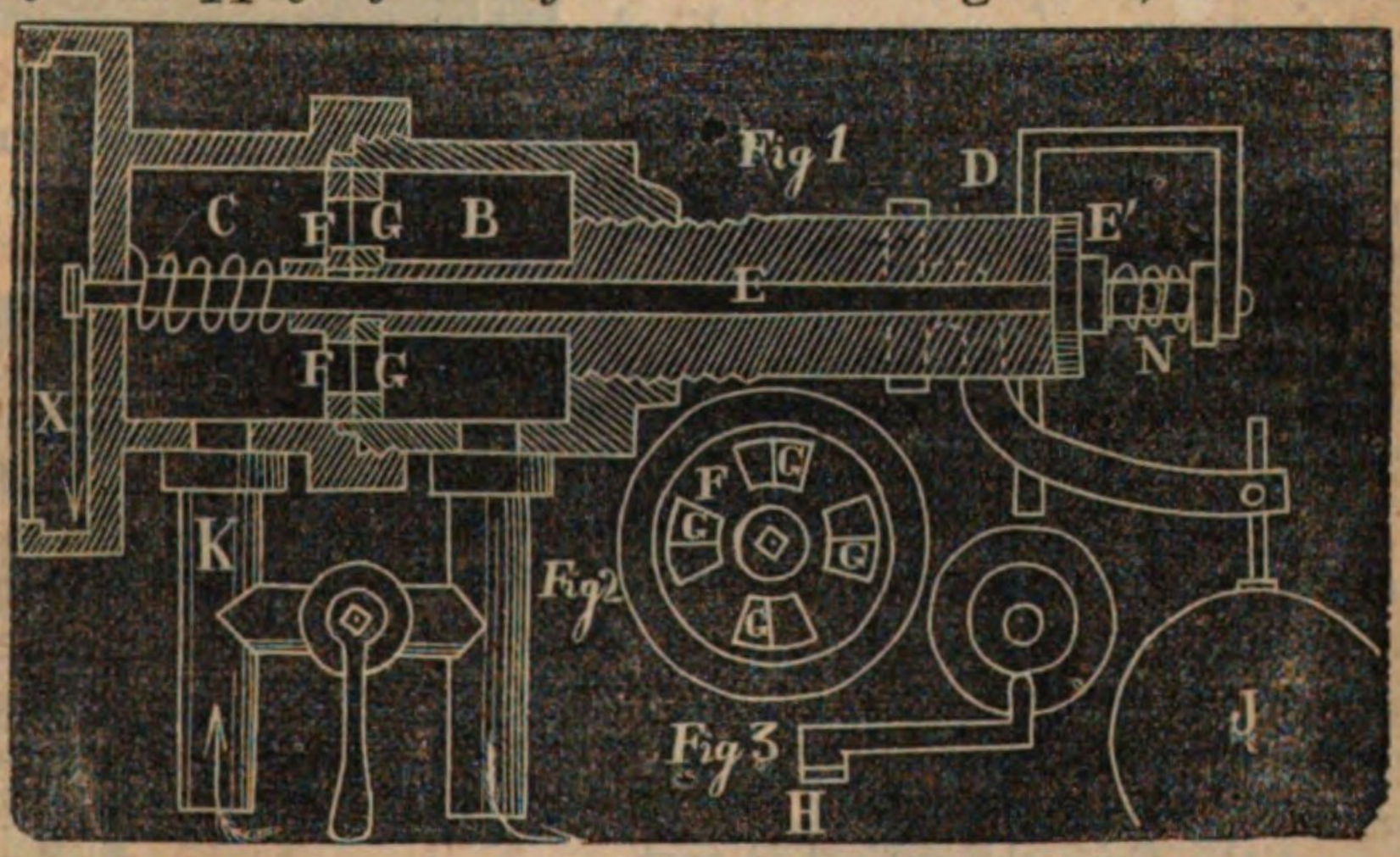
No. 9,894.—Lebbeus Caswell, of Harrison, Me.—*Improvement in Seed-Planters.*—Patented August 2nd, 1853.



The principal feature of this improvement consists in an arrangement for gauging the depth to which the plough of the machine enters the ground before the seed is dropped. *f* is the gauge-wheel attached to an adjustable slide *g*, which can be raised or lowered, and fastened by a set-screw *h*. The axle K of the gauge-wheels *f* turns at its centre on the fulcrum *l*; so that in case either wheel meets with any inequality in the ground, the wheel will rise or fall without producing any corresponding rise or fall in the plough. *m*, the coverer, is attached to the slide *g*; *d* is the spout through which the seeds are dropped.

Claim.—Placing the axle of the gauge-wheels on a fulcrum in an adjustable slide, so as to plant at any desired, and, at the same time, a uniform depth.

No. 9,895.—Samuel R. Clime, of Spring Garden, Pa.—*Improvement in the Apparatus for supplying water to Steam-Boilers, and regulating the supplying thereof.*—Patented August 2d, 1853.

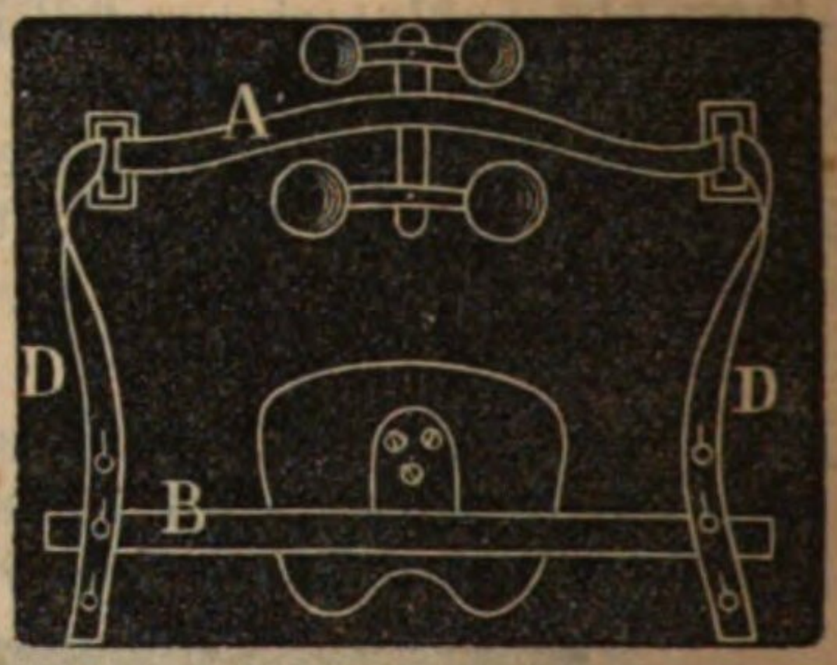


This invention consists of a water-chamber outside of the boiler, provided with a valve-seat and valve, by which, by means of an internal arrangement, the water is regulated in its course to the boiler in such quantities as may be required; the valve upon the valve-seat is caused to be opened and closed by the movement of the internal arrangement, thus keeping a regular supply of water in the boiler. The water enters at K and fills up the water-chamber C; but before it can get to the pump, it has to pass through the valve F F and seat G G. The seat G G being stationary, and the valve F F movable, and the openings in both corresponding precisely in size and relative position (see fig. 2), the size of the aperture between them is varied by simply turning the valve, which is done by the rod E. At E' is a small wheel and cap,

which forms a coggle-joint or cogs; the cap fits tight against the body of the machine, and is kept in place by the spring N. The lever H produces the motion of the rod E (see fig. 3), fitting into one of the cogs in the circumference of said wheel; said lever moving upon the pivot fastened on the collar B, and being kept in its place by means of the guide D, which derives its motion from the float J inside of the boiler. The slightest motion of the float is communicated to the rod E and valve F; and the hand X attached to the rod E shows upon a dial the operation of the apparatus.

Claim.—The water-chambers above described, and the contrivance and machinery by which their action is aided and facilitated.

No. 9,896.—H. B. CONANT, of Geneva, Wisconsin.—*Improvement in Abdominal Supporters.*—Patented August 2d, 1853.



This supporter is so constructed that the pressure may be varied at pleasure, and it may be worn by persons of different sizes.

Claim.—Constructing the supporter with two encompassing springs A B, attached respectively at their centres to the front and hind pads (the hind spring being slightly curved upwards in the middle, and the front spring correspondingly curved downwards, and both springs straight on their flat sides); and uniting the springs at their adjacent ends with straps D D of adjustable lengths; whereby its pressure may be varied, and the same supporter worn by persons of different sizes.

No. 9,897.—THOMAS J. EDDY, of Waterford, N. Y.—*Improvement in Railroad Car-wheels.*—Patented August 2d, 1853.

This invention consists in connecting the solid hub and chiselled rim of a cast-iron wheel, by means of a series of spokes and a disk, all cast in one piece, and severally formed and arranged in such manner that they will not be strained by the contraction of the metal, as it cools and solidifies at the time the wheel is cast.

B is the hub; A, the rim; D, spokes; C, disk.

Claim.—A cast-iron car-wheel made in one piece, in which one end of the hub is united to the rim by means of a disk, and the other by means of a series of spokes.

No. 9,898.—C. S. BOYNTON, of New York, N. Y.—*Improvement in Paper-ruling Machines.*—Patented August 2d, 1853.

This improvement consists in employing feeding-guides attached to the endless apron, for the purpose of properly feeding the paper to the pens.

Claim.—The employment of the guides, by which the paper may be

properly adjusted upon the apron, and fed underneath the pens. Also the guides or stops attached to the selvedge of the endless apron, for the purpose of elevating the pens from the paper at required distances, according as the guides are adjusted upon the apron, and thereby causing the paper to be ruled in lines of the desired length, and having the requisite spaces between them.

No. 9,899.—Joseph R. Miller, of Jersey City, N. J.—*Improvement in Submarine Tunnels.*—Patented August 2d, 1853.

The claim explains the nature of this invention.

Claim.—Constructing submarine avenues, by casting them in short manageable sections, sinking each successively to its place, and uniting their ends successively by means of flanches, bolts, and packing; when these are combined with a lip or lips at the end of each section, to insure the bolt-holes, and other corresponding parts, to come and rest opposite to each other as each succeeding section is sunk to its place; and when the structure is made to rest upon a graded bottom as the work progresses, and is held thereto by superincumbent weight when completed.

No. 9,900.—Joseph A. Scholfield, of Westerly, R. I.—*Improvement in Temples for Looms.*—Patented August 2d, 1853.

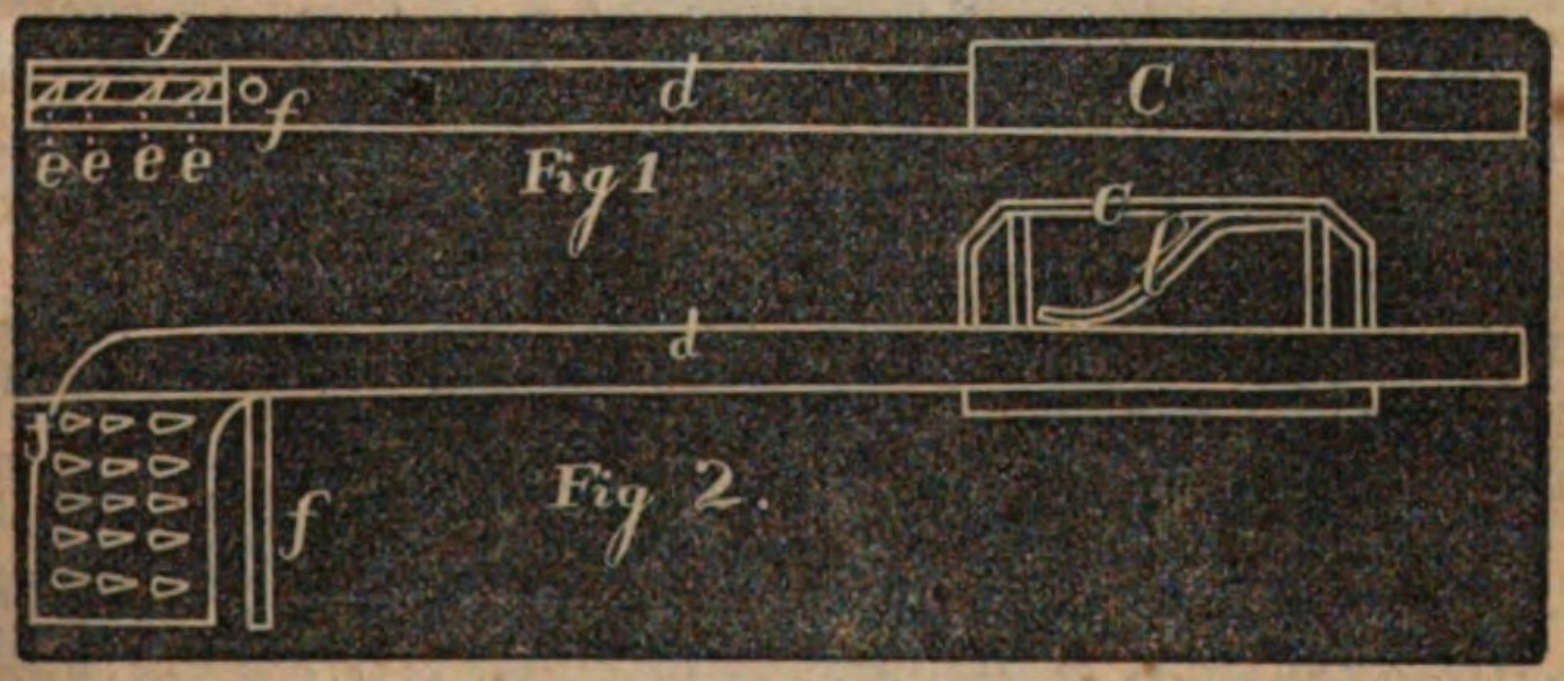
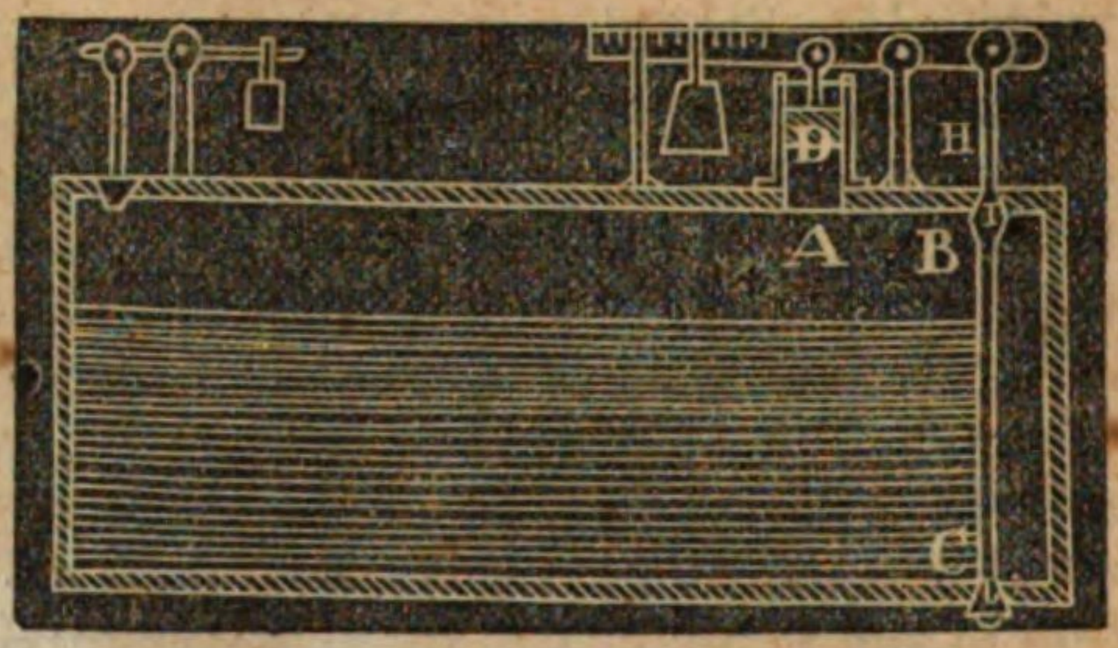


Figure 2 is a plan view of the temple with the upper plate removed. Figure 1 is a side elevation of the same; *c*, the holding-box, attached to the beam by means of screws; *d*, the shank of the temple; from the lower plate project the spurs *e e e e*, inclining towards the box *c*; *f* is a pin; *l*, a spring to hold the temple in its place.

Claim.—The application of a stationary spur-plate to the temple, with the pins in said plate inclined at an angle to the breast-beam, so as to allow the cloth to be drawn over the tops of the pins as the lay beats up, and from their inclination preventing the cloth from receding during the backward motion of the lay.

No. 9,901.—John M. Reeder, of Memphis, Tenn.—*Improvement in the construction of Steam-Boilers.*—Patented August 2d, 1853.

The nature of this invention consists in providing the upper part of a steam-boiler with two openings, A and B (see fig.), in addition to that



for the safety-valve, and one, C, at the bottom of the boiler. These apertures are closed, one by cylinder D and piston, and two by valves corresponding with the openings B and C, which are so arranged as to pass the water from the boilers on to the fire under them.

Claim.—The application to steam-boilers of stem H and valves I and J, and the mode of their operation, which will, at any given pressure, allow the water in the boilers to pass freely on the fire under them, thereby reducing the steam, and preventing explosion.

No. 9,902.—JOHN R. RICHARDSON, JAMES WESTERMAN, and EBENEZER WILDER, of Newcastle, Pa.—*Improvement in Spike Machines.*—Patented August 2d, 1853.

The nature of this invention consists in the manner of forming the point of the spike by means of rollers, in combination with broad dies resting against their disks; also in other devices, which are explained by the claim of the inventor.

Claim.—The manner of forming the point as described.

2d. Slightly withdrawing the header after the head is completed, for the purpose of relieving the jaws from its pressure before they begin to open, and holding them in that position with the spike-head therein until the jaws are opened, and the movable jaw or die is nearly or quite withdrawn from the spike; then withdrawing the header to its farthest position from the dies, allowing the spike to fall: thus causing the header to perform the duty of a clearer.

3d. The combination of the cutting guide-loop, the cutter, and the holder, as constructed and operating with the movable jaw and the movable die, for the purpose of cutting off the blank at a sufficient distance from the ends of the dies to leave material for the head, and carrying it over to the stationary jaw at the same operation.

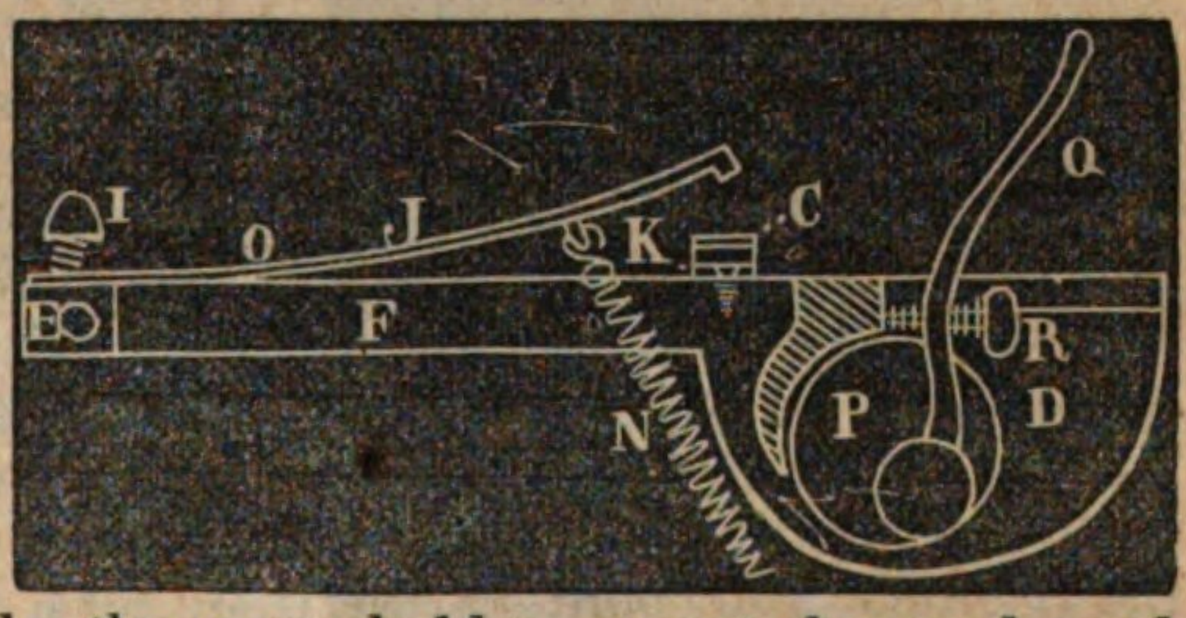
4th. Attaching the gauge firmly to the carriage of the pointing-rollers, so that it will be withdrawn as the point is drawn out by the rollers, and returned to its position when the pointers are withdrawn, without any other mechanism to actuate it.

No. 9,903.—ITHIEL S. RICHARDSON, of Boston, Mass.—*Improvement in Atmospheric Telegraph and Railway.*—Patented August 2d, 1853.

This invention consists in a method of transporting freight and passengers through air-tight cylinders, the pressure of the atmosphere behind a movable plunger being used to propel the load, the air in advance of the plunger being exhausted; by means of which the inventor intends transmitting letters, packages, and even more bulky articles of freight and passengers from one point of the country to another at a great rate of speed.

Claim.—The check-plate, consisting of three pieces, two being stationary, and the third or middle one revolving between them air-tight, constructed as described, or in any manner substantially the same, for the purposes set forth. Also, the turn-table, constructed of a ring and its station-box, in combination with other rings or their equivalents. Also, the method of announcing the arrival of the plunger, by means of the compression of the air within the cylinder at the instant of the arrival of the plunger, through the orifice in the cylinder, the valve, and the hammer; compressed air being the agent. Also, the combination of the pendant weighted lever with the valve and spring, or analogous devices; by which means the valve is drawn up to its seat when no longer kept open by the pressure of the atmosphere, and firmly locked in that position until the lever is again tripped, by the passing plunger or load.

No. 9,904.—Stephen P. Ruggles, of Boston, Mass.—*Improvement in Printing-Presses.*—Patented Aug. 2d, 1853.



The nature of this invention consists in so arranging a series of diverging springs (see fig.) upon a plate K, extending across the rear or lower part of the platen D, as that they will make a guide for the paper when it is sliding on to the tympan; the springs are forced down by the paper-holder, so as to be condensed between the type and the furniture of the press.

The paper, guided by the diverging springs C, is placed on the tympan, when the platen is drawn up by the arms eccentrically arranged on the circular plates on the shaft which drives the press, until it reaches the paper-holder J, which, by the resistance of the spiral spring N, presses down the paper-guides, and then clasps the paper between the holder and the tympan, and holds it until it reaches the impression, and falls back to nearly its lowest position, when the paper-holder is released by the relaxation of the spring, and the sheet is removed. F is one of the arms; E, the rock-shaft; P, eccentric-shaft passing through the platen D; I, set-screw; O, lever; R, set-screw resting against the platen to regulate a heavy or light impression. The figure represents an end view of the platen, detached from the press. To stop the impression the lever Q is drawn down, which lowers the platen on its axis, so as to prevent it from reaching the form.

Claim.—The combination of the adjustable-gauge with the diverging-springs, for catching and guiding the edge of the sheet when it is sliding to its position.

No. 9,905.—Nathan Thompson, Jr., of Williamsburgh, N. Y.—*Improvement in the Mode of Indicating the Height of Water in Steam-Boilers.*—Patented Aug. 2d, 1853.

This invention consists of an apparatus for stopping the main engine,

and bringing it to a state of rest when the water-level becomes dangerously low; which is accomplished by a float, a throttle-valve, and an appropriate connection between them; the whole so arranged, that the falling of the water gradually contracts and finally closes entirely the area of the steam-pipe, at first gradually retarding, and finally completely stopping the main engine. Upon the float is a pin which rises perpendicularly, and prevents the float from rising higher than the ordinary working water-level.

Claim.—The method of "slowing" and stopping the main engine by means of a float or its equivalent, which is governed in its position by the height of the water in the boiler, whereby a reliable intimation of the level of the water is obtained, which cannot be disregarded. Also, a hook and pin, or their equivalents, in combination with a boiler float, whereby the fioat is prevented from acting during ordinary fluctuations of the water-level.

No. 9,906.—William Van Anden, of Poughkeepsie, N. Y.—*Improvement in Machinery for making Railroad Chairs.*—Patented Aug. 2d, 1853.

The nature of this invention consists in arrranging, and combining with a suitable frame, a shaft propelled by any convenient power, on which is secured a cam for operating a lever for depressing the die for holding the metal, while being cut by a pair of roller-shears, which are forced upwards by a second lever, operated by a second cam, also on the driving-shaft, the operation of the rollers being to cut the grain of the metal more perfectly than by a fixed or punching cutting arrangement. Also, in combination with the roller-shears, two adjustable benders, secured at each side of the machine on the ends of levers, operated by cams on the ends of the driving shafts, for the purpose of bending over the lips of the chair as they are cut and raised by the action of the roller-shears, so as to give them the form of the die, from which the chair is discharged by a forked rod on the end of a connecting-rod, working on the main or driving shaft, and projected out by a cam on the driving shaft, as the shears, benders, and die are restored to their original position, to push the chair off the head of the die, and projected back again by a second cam on the opposite side of the driving shaft for that purpose.

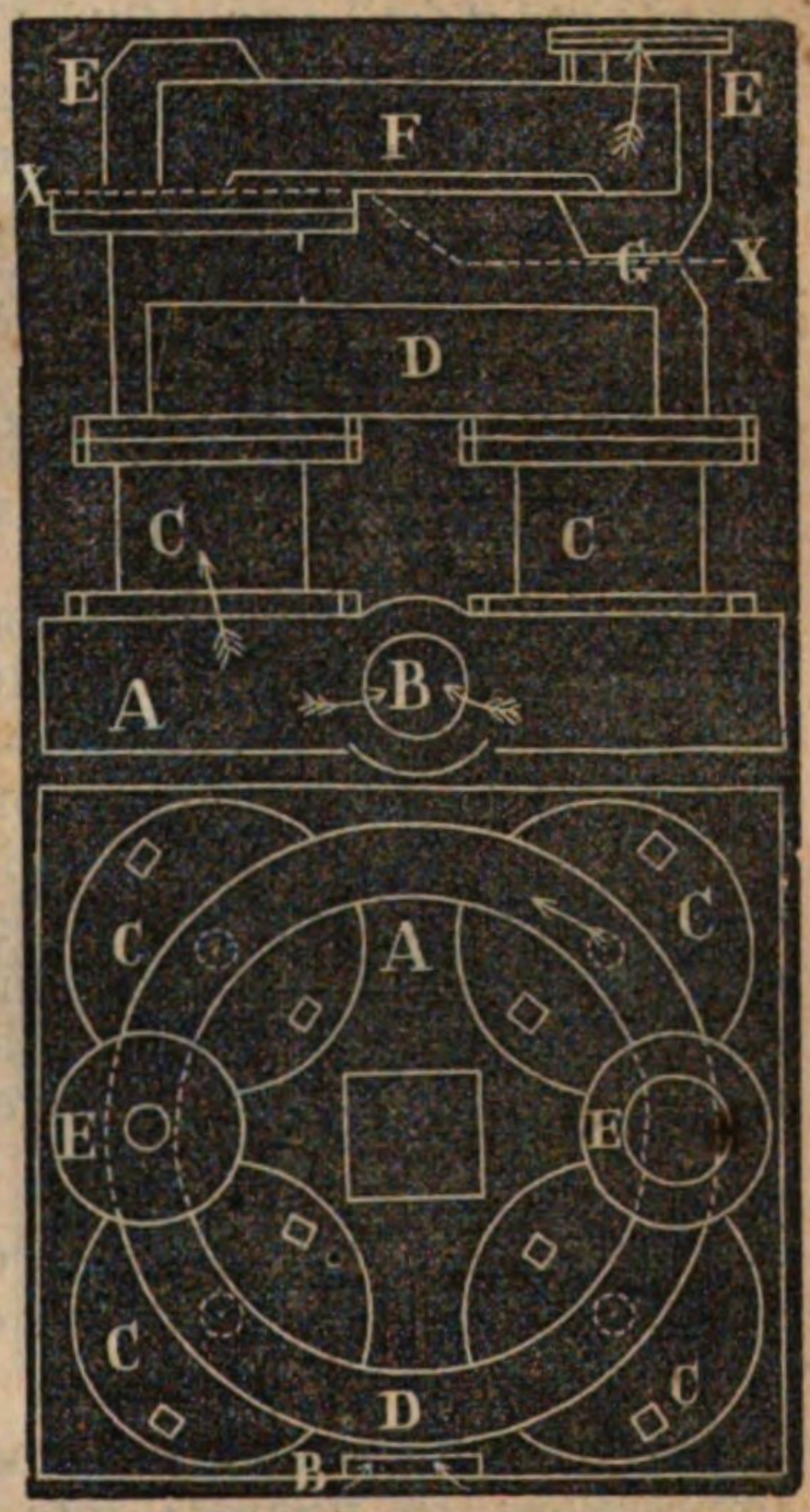
Claim.—The combination of rollers with adjustable shear-stocks, for cutting and shaping the lips of wrought-iron railroad-chairs, and their combination with the dies. Also, the use of a movable drop upper-half, or female die, in combination with a stock, and their combination with the discharging apparatus. Also, the use of adjustable and removable benders, in bender-stocks, in combination with the levers and cams on the main shaft for operating the same in an oblique and downward direction, and their combination with the dies and cutters for making wrought-iron railroad-chairs.

No. 9,907.—Stephen Waterman, of Williamsburgh, N. Y.—*Improvement in the means of Obviating the Danger from Steam-Boiler Explosions.*—Patented August 2d, 1853.

The nature of this improvement may be understood from the claim of the inventor.

Claim.—The combination, with a safety-chamber and safety-plate, of a cold-water reservoir, which has means of communication at the lower part, with the safety-chamber or steam-space in the boiler, and at the upper part with the steam-space in the boiler; which means of communication are closed, when the boiler is in proper operation, by cocks or their equivalents, which are caused to open by the tearing apart of the safety-plate.

No. 9,908.—Jesse Young, of Franklin Furnace, Ohio. — *Improved Arrangement of Pipes for Hot-blast Furnaces.* — Patented August 2d, 1853.



This invention consists in a series of annular horizontal pipes D (see fig.), connected by short vertical pipes C and E, which also serve as supports or pedestals, and a hollow base upon which the pipes rest, and through which hollow base A the cold air is admitted into the pipes.

Claim.—The arrangement of a series of annular horizontal pipes D; short vertical connecting pipes C, E, which also serve as supports or pedestals; and a hollow base A, through which the cold air passes into the pipes, and upon which the pipes rest; by which arrangement the air is made to pass slowly through the pipes and base, and is exposed a sufficient length of time to the heat, with a small expenditure of fuel, to become heated.

No. 9,909. Austin O. Wilcox, of Philadelphia, Pa.—*Improvement in Hot-air Engines.*—Patented August 2d, 1853.

The effective power of this engine is as the capacity of the transferring cylinder is to the capacity of each working cylinder; and when the diameters of the transferring and working cylinders are equal, this ratio will be as the comparative lengths of their respective strokes. Any desirable amount of pressure on the piston is produced by condensing the medium; thus forming a powerful engine, which occupies comparatively little space. The engine is rendered more compact by having the renovator in the piston itself, and by applying the fire immediately under the cylinder.

Claim.—Placing the economizing disks within, or attaching them to the driving-piston itself, to effect the complete rarefaction of the heated air while the piston is descending, and before the cold air is again let into the cylinder.

Also, inclosing the exhaust end of each single-acting working cylinder with an air-tight head, when combined with a self-acting valve, which opens from the exhaust-end of the cylinder into the eduction-pipe, in order to exclude the external atmosphere, and also for the double purpose of enabling any degree of rarefaction to take place within the exhaust-end of the cylinder, without the return of air from the reservoir, and to allow the spent air finally to escape to said reservoir.

Also, inclosing each working cylinder with a jacket, regularly increasing in thickness from the bottom to the top, so that when surrounded by water or other fluid, the temperature of the working cylinder will be kept reduced to a proper and nearly uniform degree; thus preventing injury to the lubricating fluid inside, and allowing the heat to be applied immediately under the cylinder.

No. 9,910.—Jean T. Coupier and Marie A. C. Mellier, of Paris, France.—*Improvement in the manufacture of Paper-Stuff.*—Patented August 2d, 1853.

The claim explains this improvement.

Claim.—The process of reducing straw and other similar vegetable matter into pulp, for making paper: the process consisting in applying and circulating the solution of the hydrate of soda or potash. Also, the employment of hypochlorites in the process of bleaching straw or similar vegetable matter, when prepared as above for the purpose of making paper, as set forth, that is to say, using them at or about the strength set forth in the specification, viz. 3° Beaumé; and this degree of strength only when employed upon such materials.

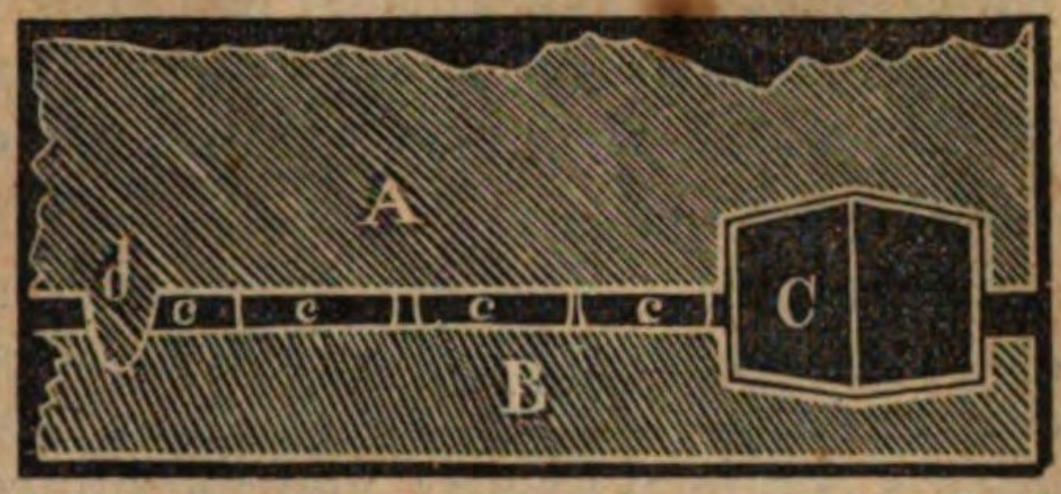
No. 9,911.—Julius Herriet, of New York, N. Y.—*Improvement in Elastic Type for Printing on Irregular Surfaces.*—Patented Aug. 2d, 1853.

The inventor prepares a mould of plaster, containing the requisite impressions or figures; into which he casts a substance or compound, of three parts of coopers' glue, and two parts of molasses. This substance when well mixed is poured into the mould, and when cold taken out, and is ready for use.

Claim.—Making, by casting in moulds or by pressure, plates with raised characters or figures, the entire substance of such plates being sufficiently elastic to adapt them to printing on irregular surfaces.

No. 9,912.—George T. Parry, of Spring Garden, Pa.—*Improvement in Anti-Friction Boxes.*—Patented Aug. 2d, 1853.

The nature of this invention consists in the employment of a series of rollers made in the form of double frustums of cones, united at their bases c (see fig.), and adapted to run in grooves of nearly corresponding

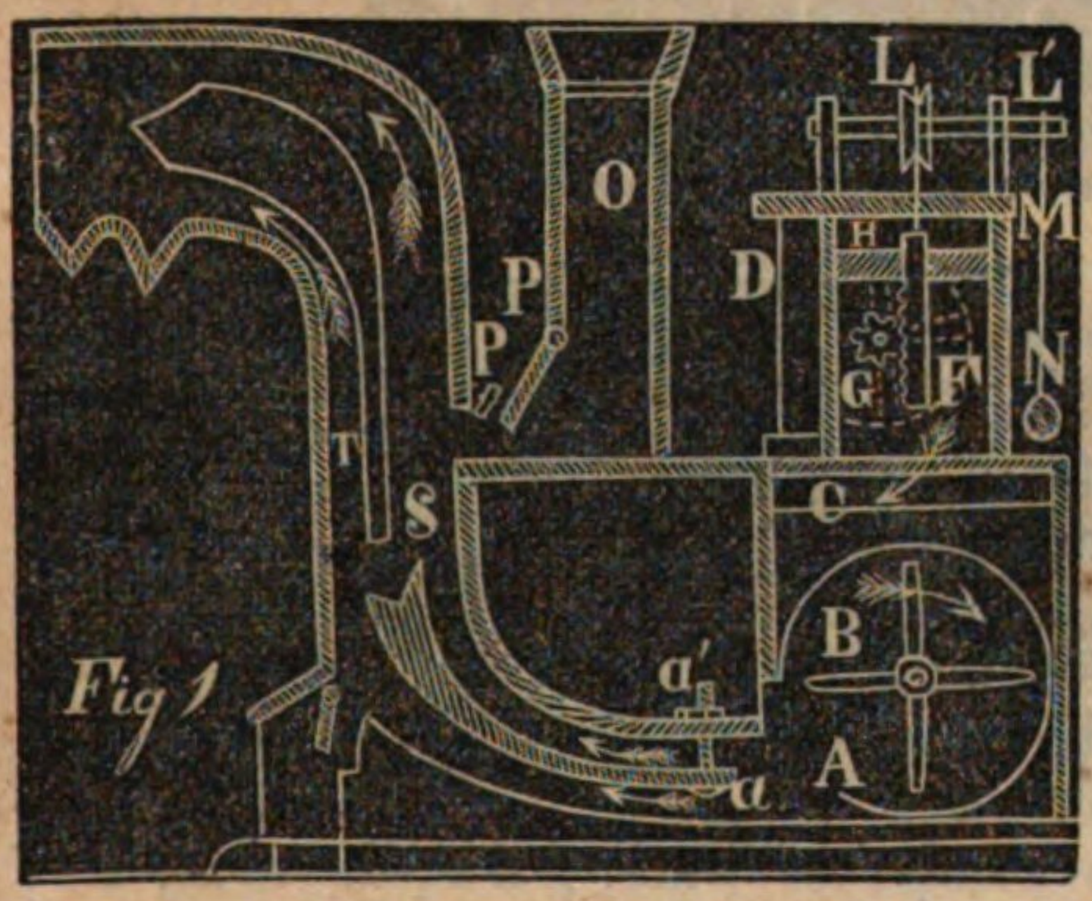


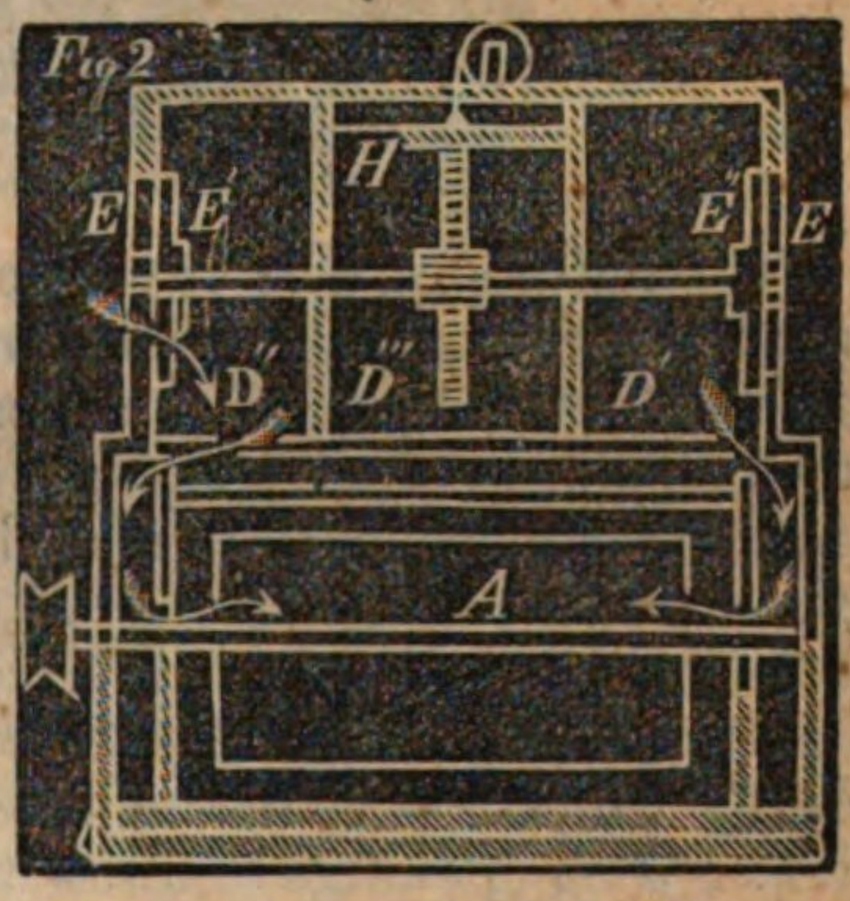
form, made in the surfaces between which they are interposed. The inner frustums of the rollers, and the corresponding parts of the surfaces of the grooves, are made on bevels proportioned to the diameter of the rollers and the grooves in which they run, whereby the rolling of the rollers about a common centre is accomplished without slip.

Claim.—Making the rollers in the form of double frustums reversed and united at their bases, and travelling in circular grooves of nearly corresponding form of the surfaces between which the rollers are interposed.

No. 9,913.—Samuel Canby, of Ellicott's Mills, Md.—*Improvement in Winnowers of Grain.*—Patented Aug. 9th, 1853.

This invention relates to the manner of graduating the blast of a winnower, so that it shall not be influenced by the irregularities of velocity to which the fan or blower may be subjected. (See figures.)

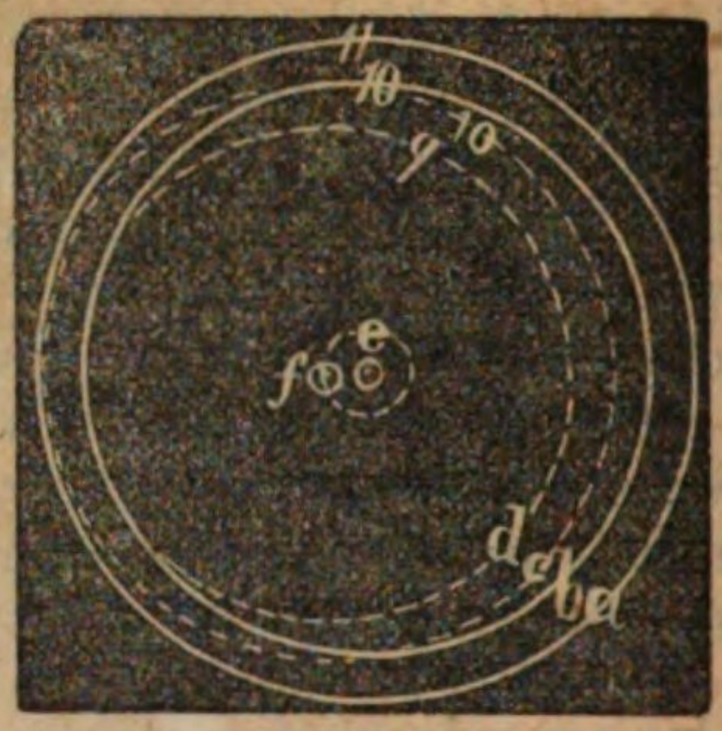




Above the fan-chamber A, and opening into it, is a regulator consisting of three apartments D′ D″ D‴, the exterior D′ D″ containing openings E in their sides for the admission of air to the fan, the central department D‴ being furnished with a piston H suspended by a cord passed over an exterior pulley L, and balanced by a weight N, at the extremity of a lever M, attached to the shaft L; extending across the three apartments is the shaft I: the under side of the piston H being attached to a rack-rod F, mashing into a pinion G upon the shaft I. The piston H opens the air-passages as the blast is weakened, or diminishes their extent when the blast is too strong. O is the hopper, P, a swinging door, which distributes the grain evenly over the bottom of the hopper. The blast is passed through the channels S and T.

Claim.—The construction of the receiving and discharging passages for the grain; that is, the passage at door P, passage C, and passage C″, in the manner and for the purpose as set forth.

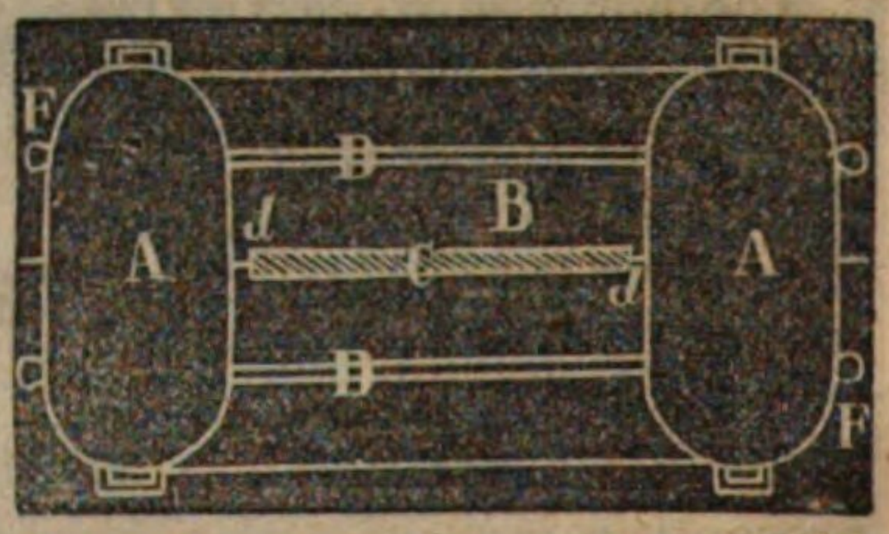
No. 9,914.—Frank Dibben & Lewis Bollman, of New York, N. Y.—*Improvement in Multiplying Gearing for transmitting Rotary Motion, at increased or decreased Velocities.*—Patented August 9th, 1853.



(See figure.) The circles *a* and *b* in the diagram represent the pitch-lines of two annular toothed wheels, hung loosely upon a common axis *e*; and the dotted circles *c* and *d* represent the pitch-lines of two toothed wheels both fast together upon the common axis *f*; *c* rolling on *a*, and *d* on *b*; and both axes *e* and *f* stationary in relation to each other. Suppose the circumference or number of teeth in the wheels to be in the following proportions: $a=11$, $b=10$, $c=10$, and $d=9$; then if all the circles are made to revolve, *a* will make 100 revolutions for every 99 of *b*, &c.

Claim.—The employment (for the purpose set forth) of two pairs of toothed or friction wheels, *a c* and *b d*, combined and arranged as described.

No. 9,915.—Daniel Dodge, of New York, N. Y., and Phineas Burgess, of East Boston, Mass.—*Improvement in Life-Boats.*—Patented August 9th, 1853.



The nature of this invention consists in constructing a platform C (see figure) stationary in the central horizontal plane; and the two sets of thwarts are secured in the boat at fixed points on opposite sides of, and at equal distances from the platform. A A represents the hull of the boat, being water-tight; B, the interior of boat; *d d*, openings to allow the escape of water; D D, thwarts; F F, guard-rails or life-rods, secured in fastenings.

Claim.—The central fixed platform C, which is secured in the opening B of the boat, in a plane passing centrally and horizontally, or nearly so, through the same, which may be said to form a partition between two opposite recesses, the platform serving as a floor to the boat, whichever side is upward, and being, from its fixed position, incapable of becoming disarranged by any accident.

No. 9,916.—George W. Eichell, of New York, N. Y.—*Improvement in Setting up Ten-Pins and Returning Balls.*—Patented August 9th, 1853.

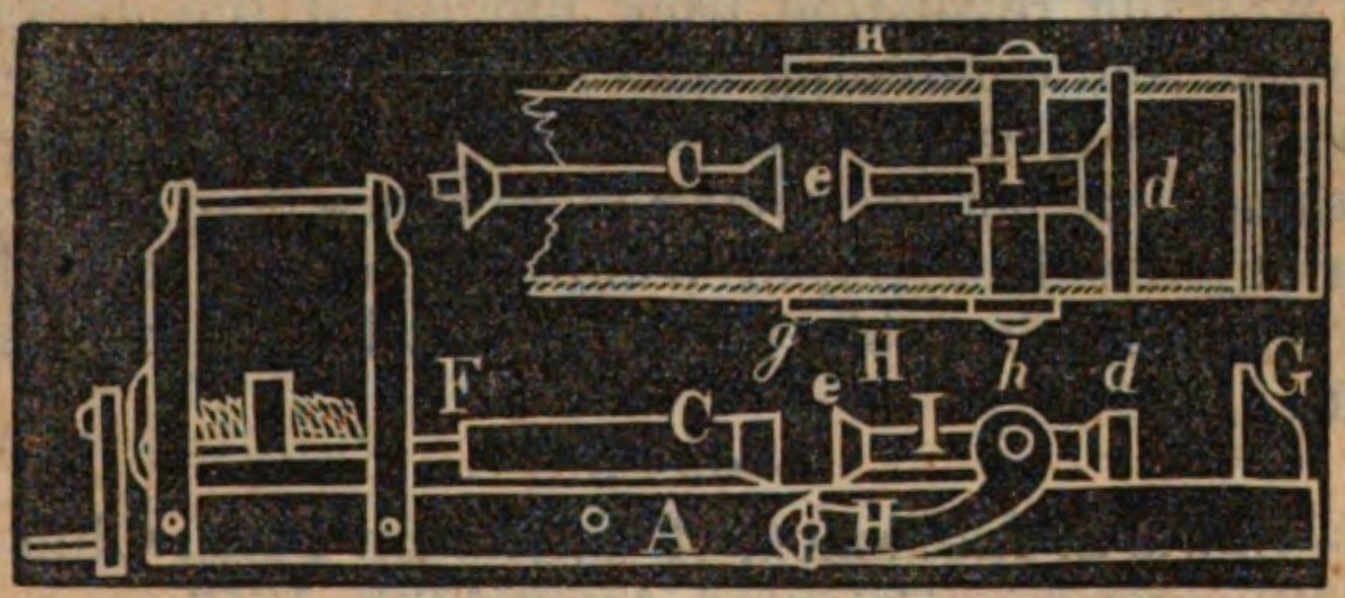
The claim will sufficiently explain this invention.

Claim.—Setting up the pins by an apparatus, operated from the head of the table, by means of weights attached to them by cords, when combined with the elevation board, which raises and sustains

the weight or weights, to admit of the pins being knocked down. Also, the use, at the back end of the table, of a delivery board, constructed and applied as described, in combination with an elevator, for the elevation and return of the balls.

No. 9,917.—Benj. H. Green, of Princeton, N. J.—*Improvement in Carpenters' Clamps.*—Patented August 9th, 1853.

The nature of this invention consists in the construction of the clamp, in such a manner as to be applicable to many different sizes of articles. A pair of arms H H (see figure) are attached, one on each side, to the beam A, by means of bolt *g*; the arms vibrate upon the bolt, which may be transferred to other holes in the beam A. Through the curved end of the arms passes another bolt *h*, and through bar I, which has a large jaw *d* on its shorter, and a smaller jaw *e* on its longer arm.



The bar I is made to turn freely upon the bolt *h*. The bar C having a small jaw on one end, may be attached to the larger jaw F, but removable at pleasure. When the bar is attached to the jaw F, the smaller jaw *e* of the bar I is brought opposite its jaw, as shown in the figure. When large articles are to be clamped, the small bar C is removed, and the bar I reversed.

Claim.—The combination of the adjustable vibratory arms H H, and reversible jaws *d e*, with the adjustable clamp, for the purpose of presenting jaws of different sizes, and at different distances from each other, in the manner set forth.

No. 9,918.—John Hartin, of New York, N. Y.—*Improved Method of Drying Paper.*—Patented August 9th, 1853.

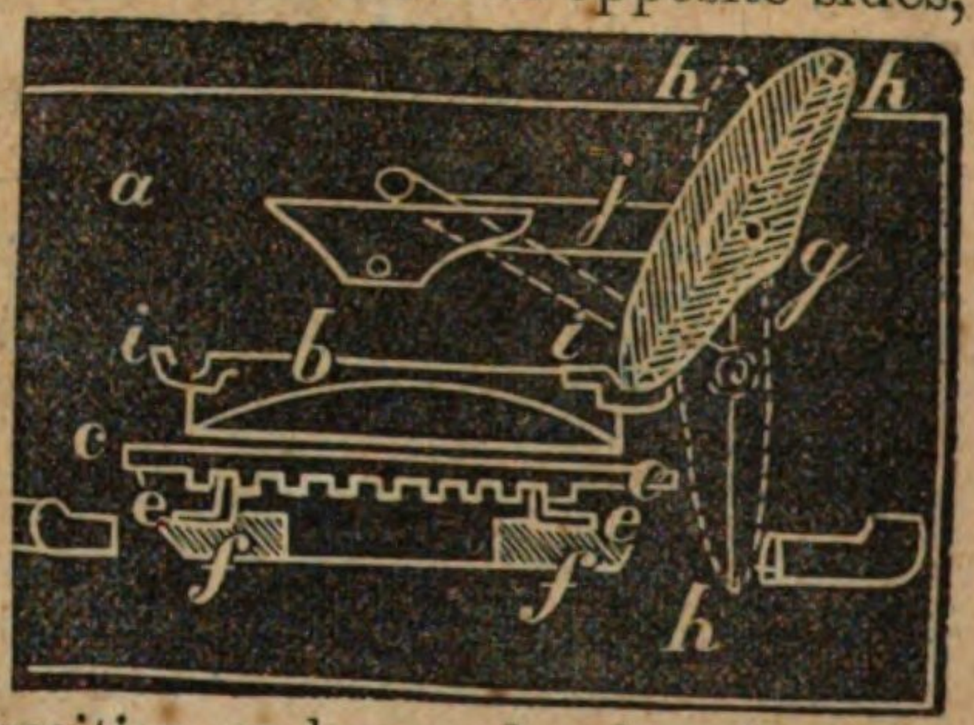
The nature of this invention consists in drying paper by conducting it between opposite series of equal-sized fans revolving with equal velocities, causing the air to act simultaneously upon opposite sides of the paper. The object is to give to the paper a uniform, even surface.

Claim.—The above-described method of drying paper.

No. 9,919.—Samuel Hickok, of Buffalo, N. Y.—*Improvement in Railroad Car-Seats.*—Patented August 9th, 1853.

This invention consists in the method of readily changing the seat in either direction, and converting it from an upright to a re-

clining position; *e* is the support for the outer end of the seat (see figure), to which the seat-frame is secured. Secured on opposite sides, and to the bottom of the sliding seat, are two steel notched bars *c c*; and secured to the side-rails *f f* are metal plates *e e*, which fall into the notches, and confine the seat in position. The seat can be slid out either to the right or left, by pressing the end of either of the spring bars which project in front, regardless of which side the back of the seat is placed. The back of the seat may be raised in an inclined position, or lowered, when its position will be nearly vertical.



Claim.—Constructing a car-seat, by connecting and arranging the sliding seat with the reversible back hinged at the extremity of the reversing arms; and combining therewith the double ratchet-bars, in such a manner that it can be easily converted into a day or night seat, and at the same time not occupying more space than the ordinary seat. Also, the triangular foot-rest, in combination with the sliding seat, whereby it is made adaptable to the seat, when used either as a day or night seat.

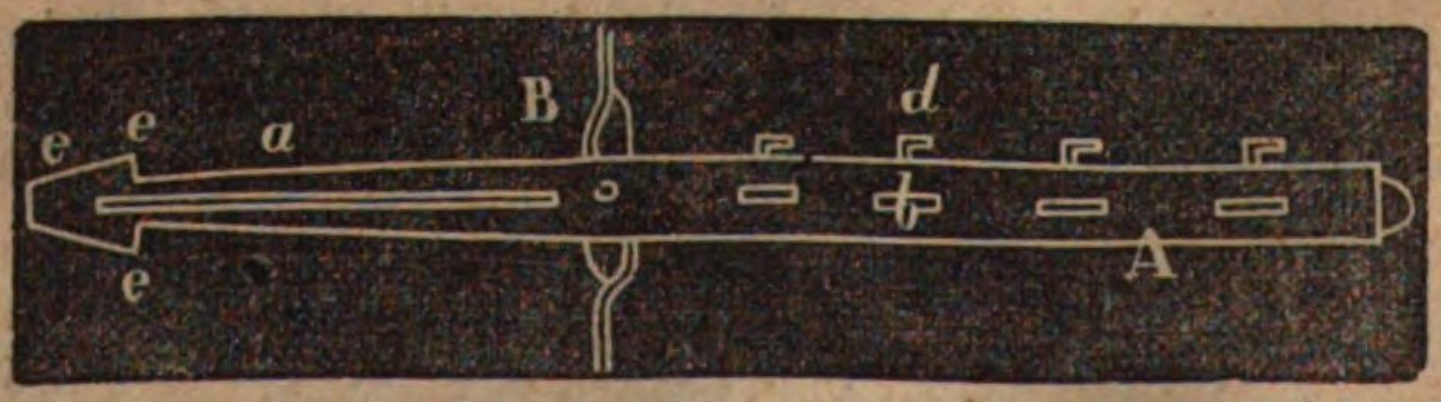
No. 9,920.—Lewis S. Ingraham, of Cuyahoga Falls, Ohio.—*Improvement in Winnowers.*—Patented August 9th, 1853.

The nature of this invention consists in making the screens stair-shaped or fluted, and vibrating them perpendicularly or diagonally, instead of traversing or shaking them horizontally; whereby the grain is made to fall successively from one stair or flute to the next; in combination with a plain screen, which may be used either before or after the stair screen.

Claim.—The stair or fluted screen, constructed and operated substantially as described, for the purpose set forth.

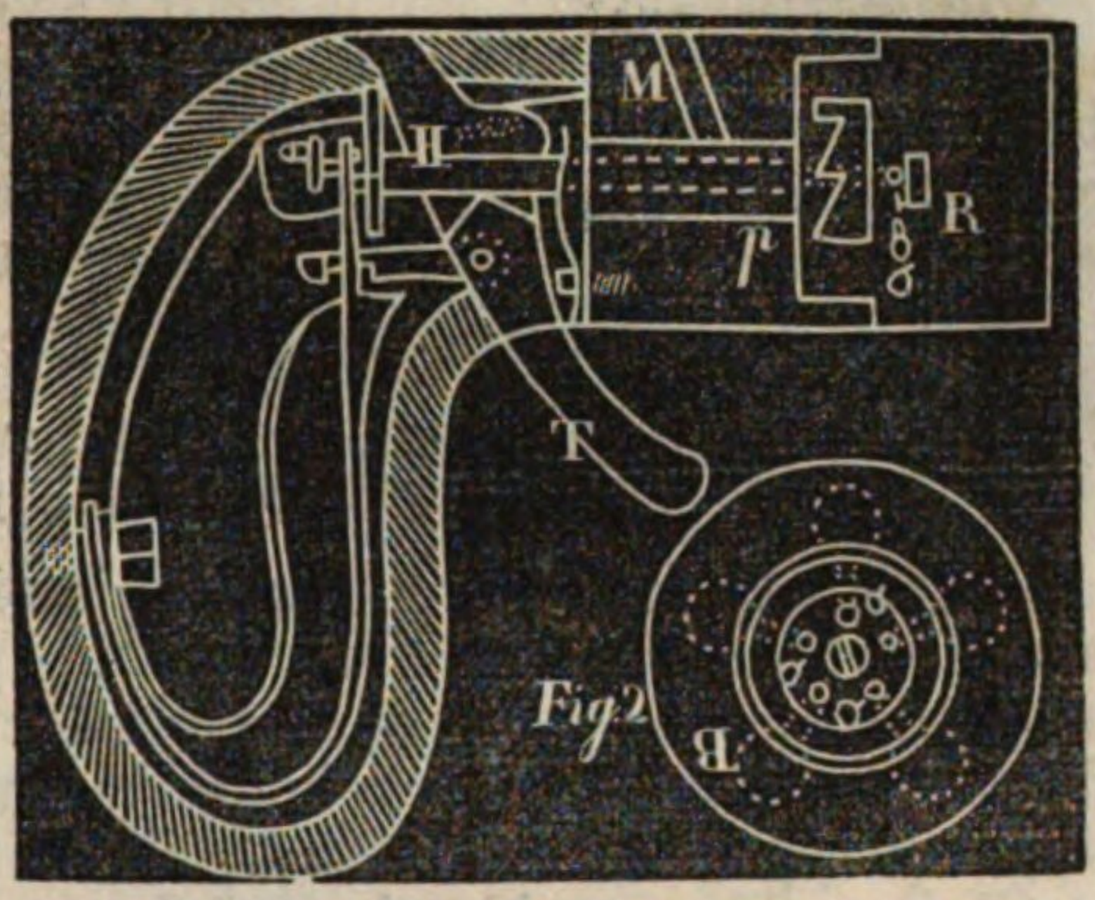
No. 9,921.—John W. Jenkins, of Greenport, N. Y.—*Improvement in Iron Posts for Fences.*—Patented August 9th, 1853.

The figure represents the post A, with the arrow-headed or barbed button pieces *e e e*; to the post is attached a twisted cross-piece B; *b*, the openings for the boards or rails; *d*, hook for wire.



Claim.—The arrow-headed or barbed button pieces *e e e* of the post, in combination with the twisted cross-piece B.

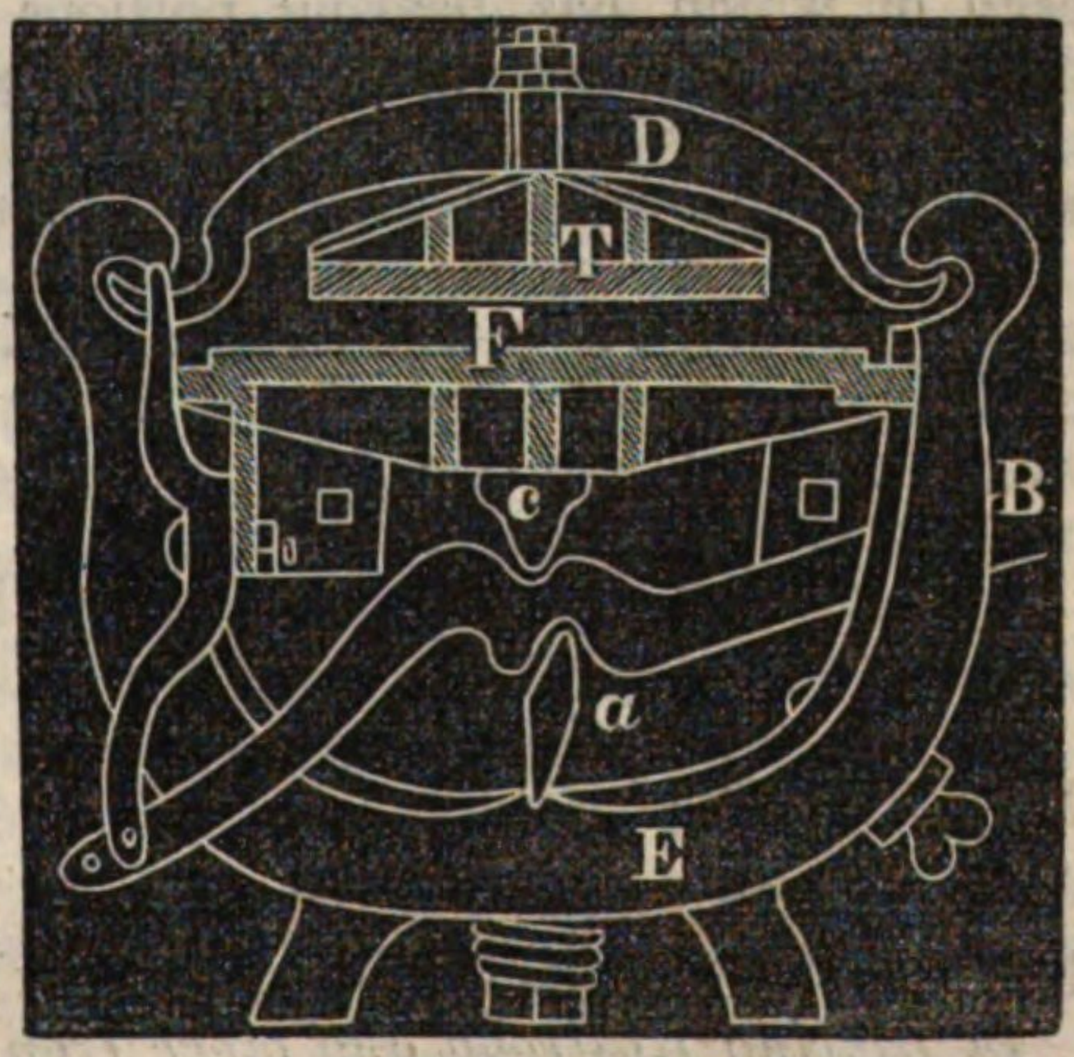
No. 9,922.—George Leonard, of Shrewsbury, Mass.—*Improvement in Fire-Arms.*—Patented August 9th, 1853.



The operation of this improved pistol is described by the inventor as follows: The trigger T (see figure) is drawn back; the notch in the lever drives back the main-spring, which carries back the hammer H; at the same time the pin *p* carries down the point of the ratchet-lever, and turns the revolving fire-guide R; when the hammer H is nearly back, one of the percussion pills in the priming magazine M drops into the hole in the hammer-guide; the motion of the trigger being continued, the lip of the main-spring lifts off the notch of the lever, when the main-spring drives forward the hammer, and the pills are exploded in the bottom of the hole in the revolving fire-guide; the fire is guided through the small hole *o* in the revolving fire-guide into one of the five small holes, into the barrel with which it is in coinci dence, and the barrel is discharged.

Claim.—A revolving fire-guide, which, by the continued operation of the fire-arm, shall successively communicate fire to the different charges of several barrels.

No. 9,923.—John Lewis, of Buffalo, N. Y.—*Improvement in Printing-Presses.*—Patented August 9th, 1853.



The nature of this invention consists in constructing a swinging bail D (see figure) and a pressure bail, in combination with the lever power; in such a manner as to bring the power upon the centre of the platen T, by one motion of the lever B. F represents the bed-plate.

Claim.—The swinging bail D and the pressure bail E, constructed and operated as set forth.

No. 9,924.—Eben L. Millis, of Rochester Depot, Ohio.—*Improvement in Corn-Shellers.*—Patented August 9th, 1853.

This invention consists of a toothed cylinder and a concave, which are used for breaking up the larger ears of corn, before feeding them

to the corn-sheller, to prevent clogging or stopping the sheller, when ears of corn are fed to the sheller in bulk.

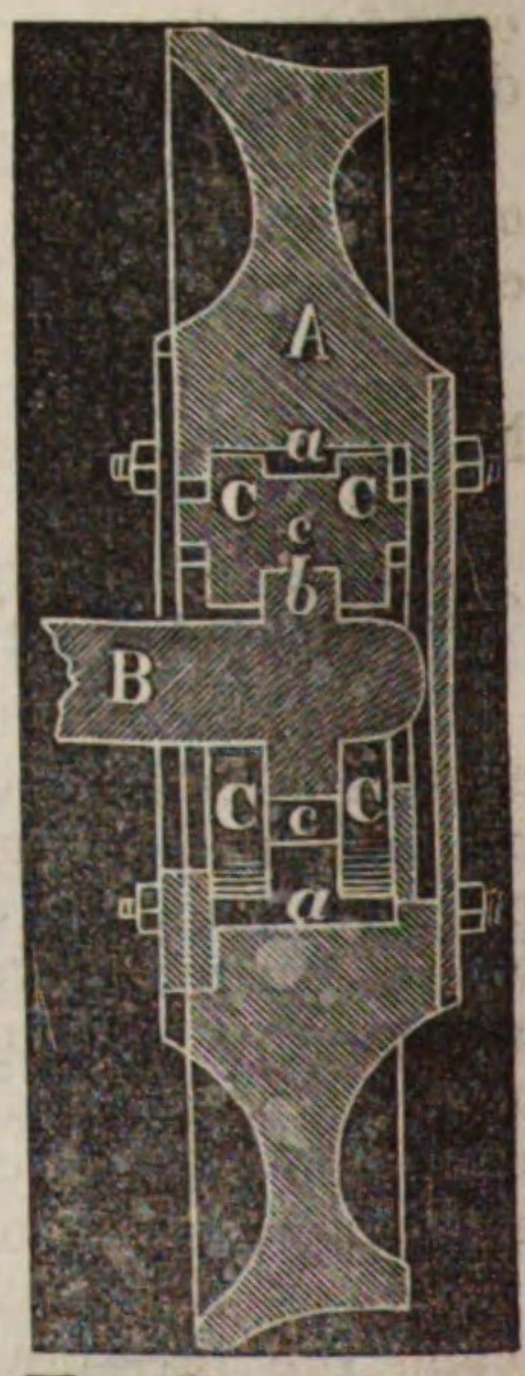
Claim.—Reducing the larger ears of corn to be shelled to a nearly uniform size with the smaller ones, by passing the whole through between a toothed cylinder and concave, where the larger ears are caught and partially reduced, preparatory to passing between the second cylinder and concave, to complete the shelling.

No. 9,925.—Joel G. Northrup, of Syracuse, N. Y.—*Improvements in Printing-Presses.*—Patented August 9th, 1853.

The nature of this invention consists in combining with a vibrating bed, a series of intermittingly rotating platens, so that the sheets may be placed on the platens in the most convenient manner, and fall from the platen after receiving the impression, without requiring a delivery apparatus.

Claim.—The combination of the series of intermittingly rotating platens with a vibrating bed, when so arranged as that the delivery of the printed sheet is from the lower of the series of platens, so that it may drop from the platen on to the paper-table, or into a drawer.

No. 9,926.—James Patterson, of Franklinville, N. Y.—*Improvement in Friction-Rollers.*—Patented August 9th, 1853.



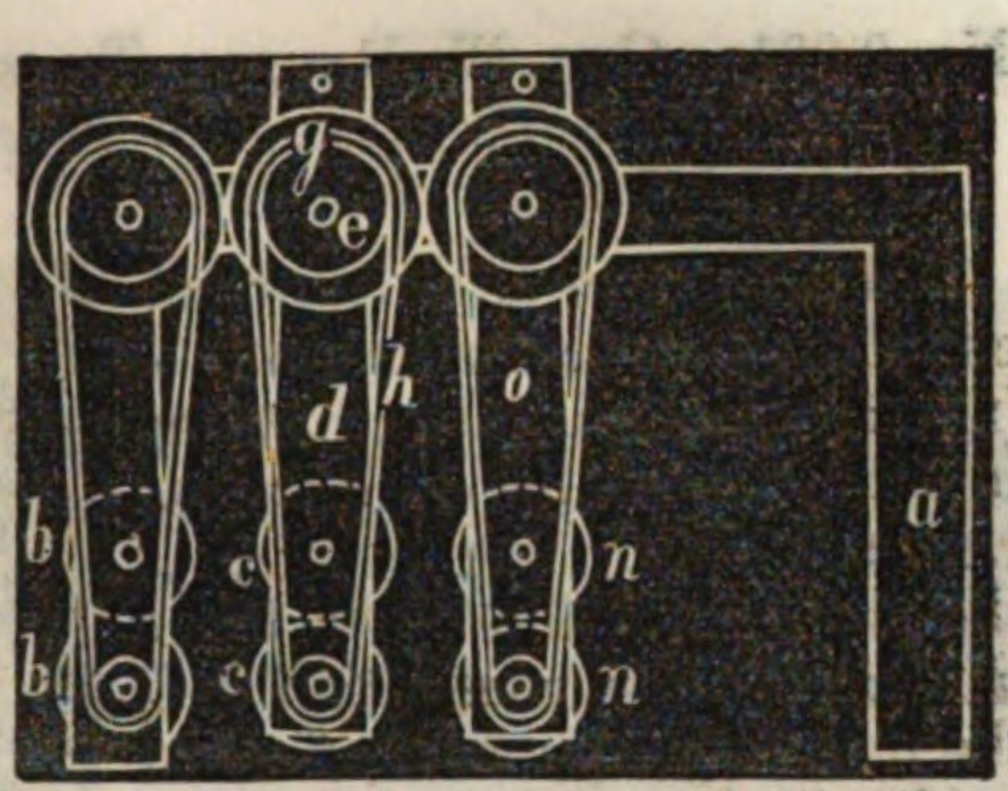
The nature of this invention consists in arranging within a central aperture of the car-wheel A (see fig.), and around its axle, a series of anti-friction rollers, each of which has bearing portions of different diameters; the larger, c c, of which roll upon the inner periphery *a* of the car-wheel, and the smaller, *c c*, upon an enlarged portion *b* of the axle B.

Claim.—Fitting the bearing of a rolling car-wheel on a fixed axle with a series of friction-rollers, having bearings of large diameter to run in contact with the wheel, and of smaller diameter to run in contact with the axle, the latter being enlarged at the point of contact with the rollers, as herein specified.

No. 9,927.—*Cancelled.*

No. 9,928.—Alfred B. Seymour, of Hudson, N. Y.—*Improvement in Rolling Railroad and other Iron.*—Patented August 9th, 1853.

In the figure, *a* represents the frame, and *b b* the first pair of rollers, mounted on fixed bearings, except that one of the rollers is adjustable to the other. Just back of this pair there is a second pair of rollers *c c*, mounted in the lower end of a pendulous frame *d*, suspended at its upper end to a shaft *e*, hung in the upper part of the frame *a*. The first pair of rollers are geared together by cog or spur



wheels, and on the shaft of one of these rollers there is a belt-wheel *g*, which, by a belt *h*, communicates motion to a cog-wheel in the upper part of the frame *a*, which engages a corresponding wheel on the shaft *e*, on which is suspended the pendulous frame of the second pair of rollers; and this last-mentioned wheel carries a pulley to communicate motion by a belt to a pulley on the shaft of one of the rollers of the second pair; and as the pulley is on the shaft to which the pendulous frame is suspended, it follows that the moving of the frame will not affect the communication of the driving power. A third pair of rollers *n* are mounted in a pendulous frame *o*, back of the first, and in every particular like the second pair.

The second pair of rollers must be geared to turn faster than the first, the third faster than the second, and so on throughout the series. The iron passes from one pair of rollers to another, and is caught successively by each pair of the series.

Claim.—The employment of a series of pairs of rollers, so arranged that the pairs shall be free to move from or towards each other, to adapt themselves to the condition of the metal in the process of rolling.

No. 9,929.—Joshua Stephens, of Chicopee, Mass.—*Improvement in Repeating Fire-Arms.*—Patented August 9th, 1853.

The operation of this improvement is explained, substantially, in the claim of the inventor.

Claim.—To so construct and combine together the lock, trigger, and mechanism for rotating, and locking and unlocking the chambered cylinder, as that while, by a simple pull of the trigger, the operations of unlocking and rotating the magazine or chambered cylinder, relocking it, and discharging the cock, shall be caused to take place by power applied to the trigger alone, the cocking shall be effected by means of the hand of the person.

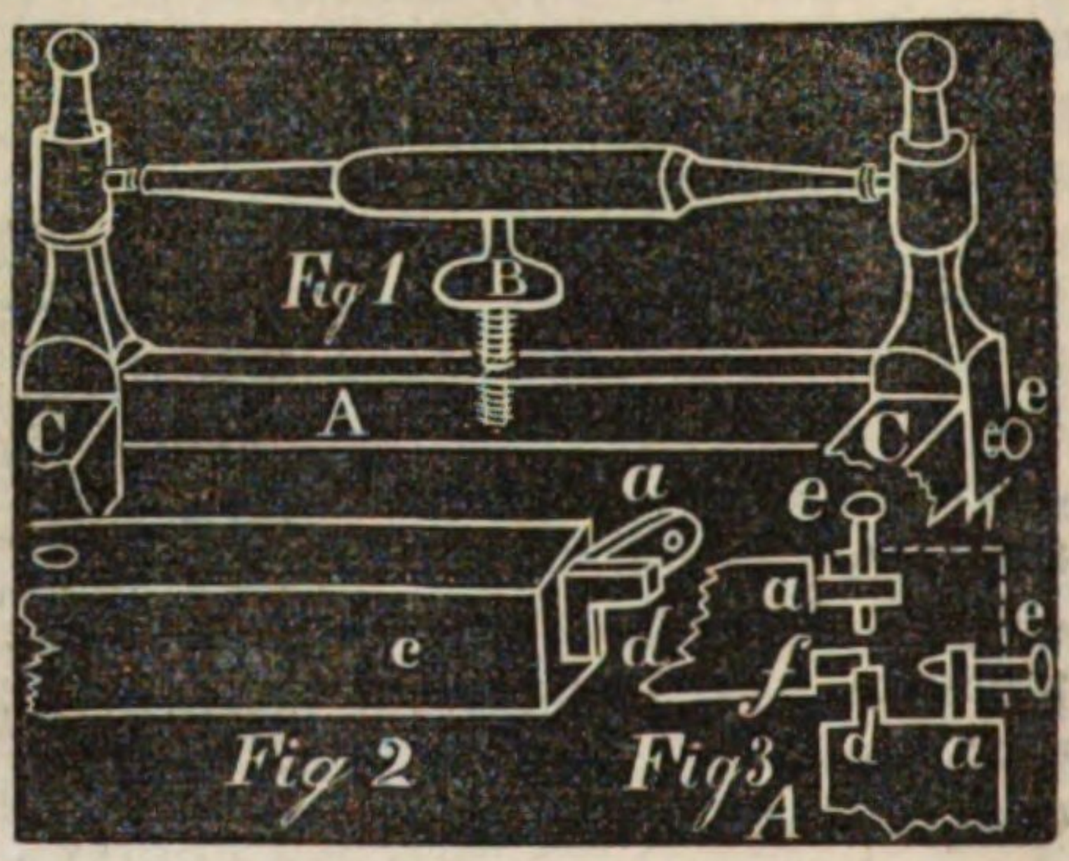
Also, the combination of the stirrup, the spring-bolt, and the lever, arranged and made to operate together.

Also, the combination of the sectoral plate (made as described) with the spring-bolt and its slot, the plate being applied and made to operate as explained in the specification.

Also, the method of constructing the lever of two parts (turning on one common pin), in combination with their confining and adjusting screws.

No. 9,930.—Suspended.—See issue of December 6th, 1853.

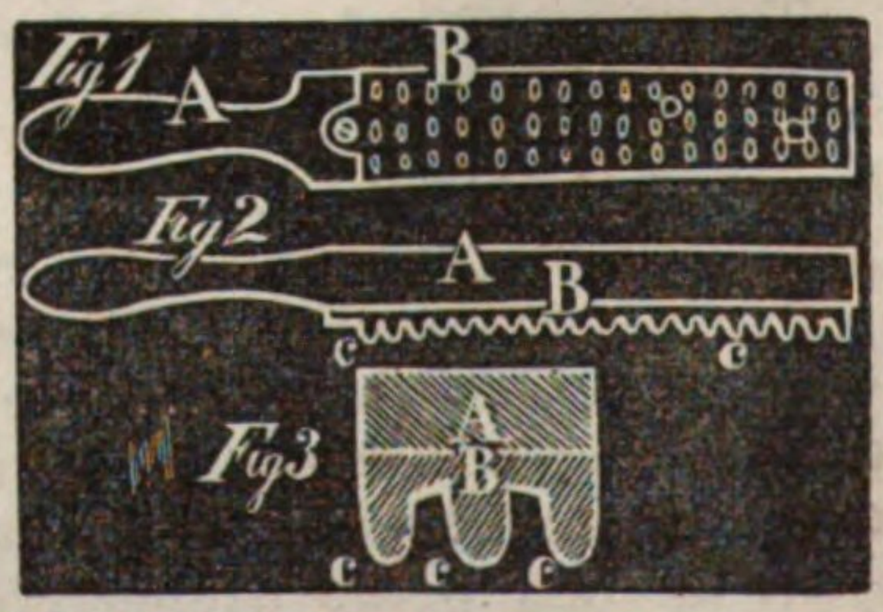
No. 9,931.—Geo. W. Baynes, Thomas Hinty, and Minter Jackson, of Glenville, Virginia.—*Improvement in Bedstead Fastenings.*—Patented August 16th, 1853.



This fastening is so constructed that the tenon marked *a* (fig. 2) being pivoted or swung in a mortise in the rail, free to rise and fall in the mortise of the post, while the other tenon *d* is rigid in its connection with the rail, may, by means of screw B (fig. 1) operating on the head and foot rails, securely fasten not only these rails, but the side ones also, by the same device. Fig. 2 shows a rail with the pivoted tenon *a* and the rigid tenon *d*. Fig. 3 shows the position of the tenons in the post, the rigid tenon *d*, in the rail A, resting upon the rigid tenon *f*, in the side rail *g*; the tenons *a a* being secured by means of pins *e e*.

Claim.—The combination and arrangement of the tenons *a a*, pins *e e*, tenons *d* and *f*, with the screw B, for the purposes set forth.

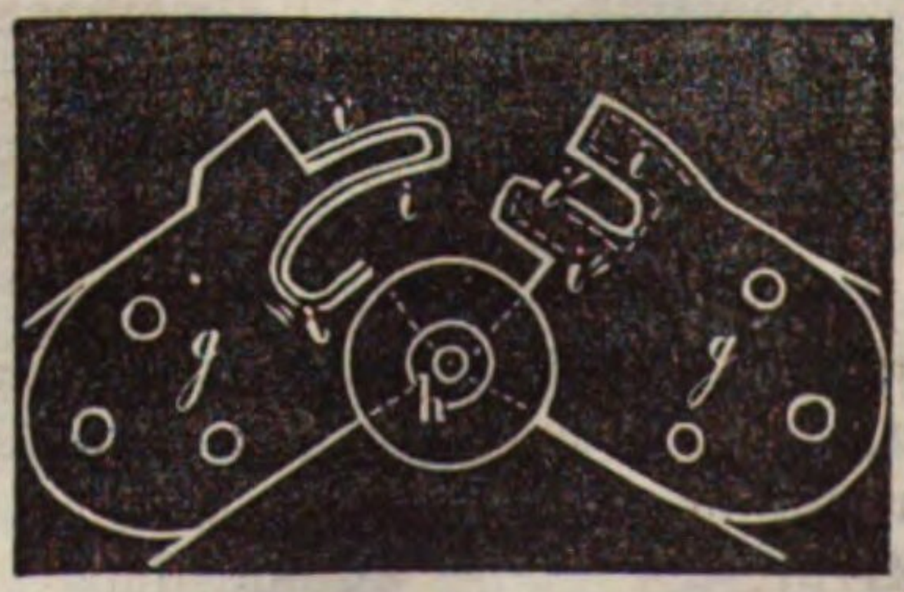
No. 9,932.—William Beach, of Philadelphia, Pa.—*Improved Instrument for making Meat Tender.*—Patented August 16th, 1853.



In fig. 1, B is the plate, with teeth thereon, fastened with screws to handle A. Fig. 2 is a side view, and fig. 3 a section.

Claim.—Forming a meat-maul for the purpose designed, by securing to one end of an oblong block of wood whose opposite end is formed into a handle, a series of rows of tapered teeth, cast on a plate, or driven singly into the wood.

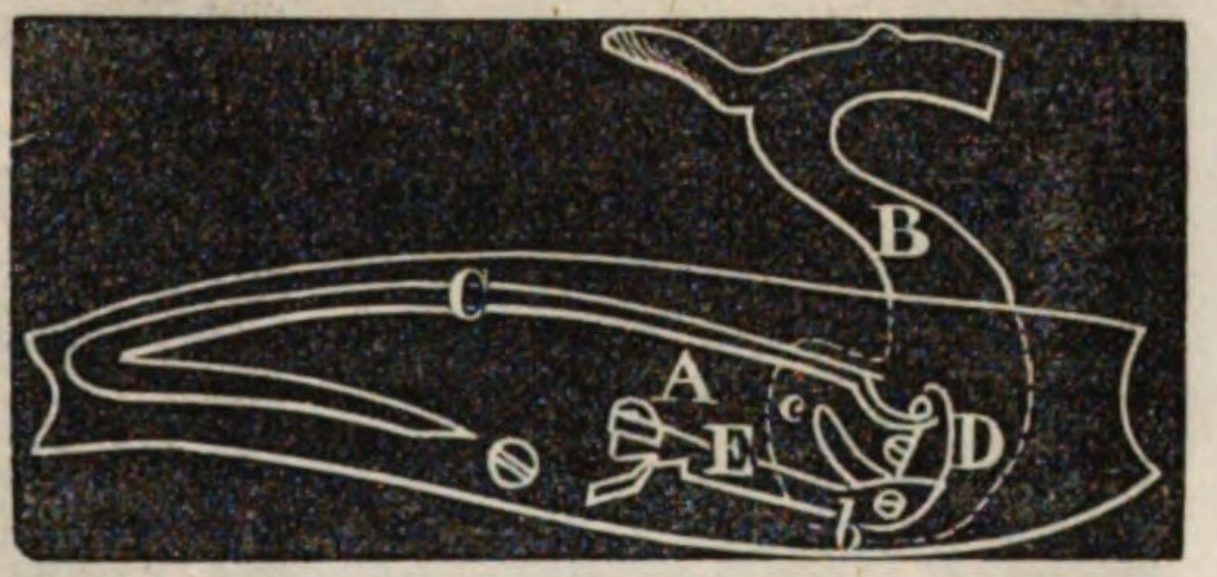
No. 9,933.—John Binder, of Chelsea, Mass.—*Improvement in Hinges applicable to the Joints of Iron Bedsteads.*—Patented August 16th, 1853.



The figure represents this improved hinge, which is intended to diminish the friction upon the centre pin *h*, upon which the two halves of the hinge *g g* turn; these two halves are toothed, the bearing surfaces *i i' i''* being arcs of a circle whose centre is the centre of the pin *h*; the jaws or teeth are chamfered, for the purpose of preventing lateral motion.

Claim.—The method herein described of constructing a hinge with the circular bearing surfaces *i i' i''*, for the purpose set forth.

No. 9,934.—P. F. CHARPIE, of Mount Vernon, Ohio.—*Improvement in Gun-Locks.*—Patented August 16th, 1853.



(See figure.) The nature of this invention consists in connecting the dog E, of the mainspring C, to the hammer B, by means of a screw *b*, passing through a curved slot *c*, in the lock-plate A, in combination with suitable packing encompassing the slot on the outside of the plate A; and surrounding the slot *c*, there is a circular recess, in which recess is placed a suitable packing, which prevents moisture from entering the lock. The advantages of this lock are "prevention from moisture" and "cheapness." (The mainspring and dog are on the inside of the plate.)

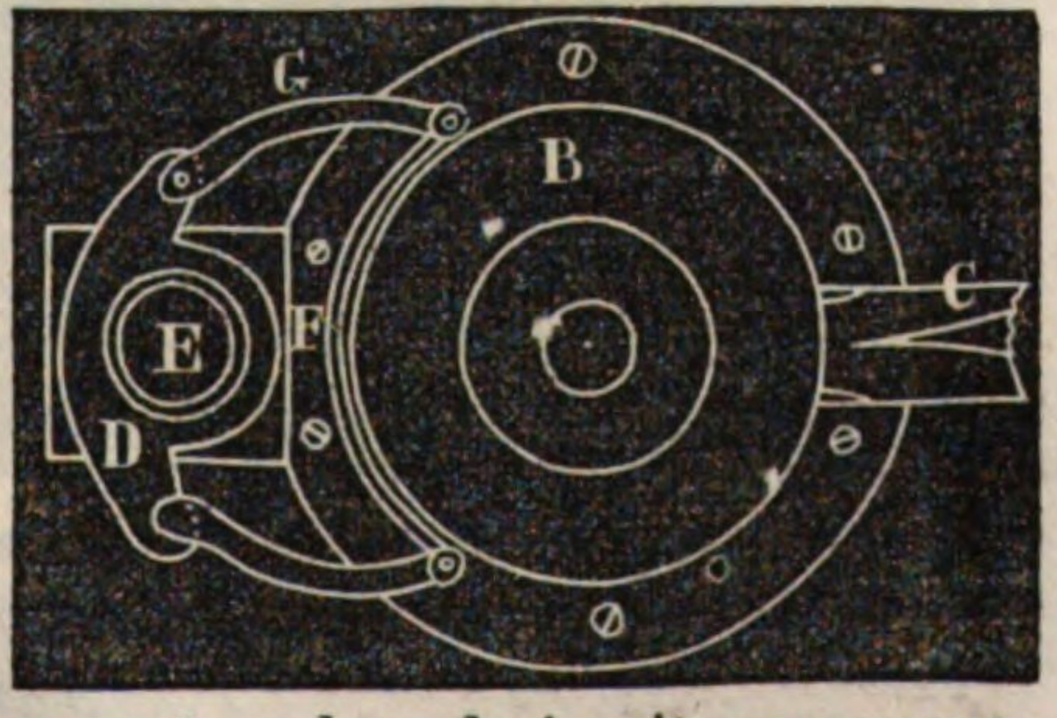
Claim.—The lock constructed substantially in the above-described manner.

No. 9,935.—THOMAS CROSSLEY, of Roxbury, Mass.—*Improvement in the Manufacture of Carpets.*—Patented August 16th, 1853.

The filling used in the production of this carpet is slightly colored, or plain, and is beat up very hard over the stretched warp, in order to conceal the latter entirely from view, and prevent the coloring matter from passing through from one side to the other. This fabric is then printed on one or both sides.

Claim.—A single-ply printed carpet, made by combining the warps and filling in the manner described, and subsequently printing them on one or both sides, without the colors passing through and discoloring or intermingling with the colors on the opposite side of the fabric.

No. 9,936.—BENJAMIN F. DELANO, Chelsea, Mass.—*Improved Rudder-Brace for Ships and other Vessels.*—Patented August 16th, 1853.



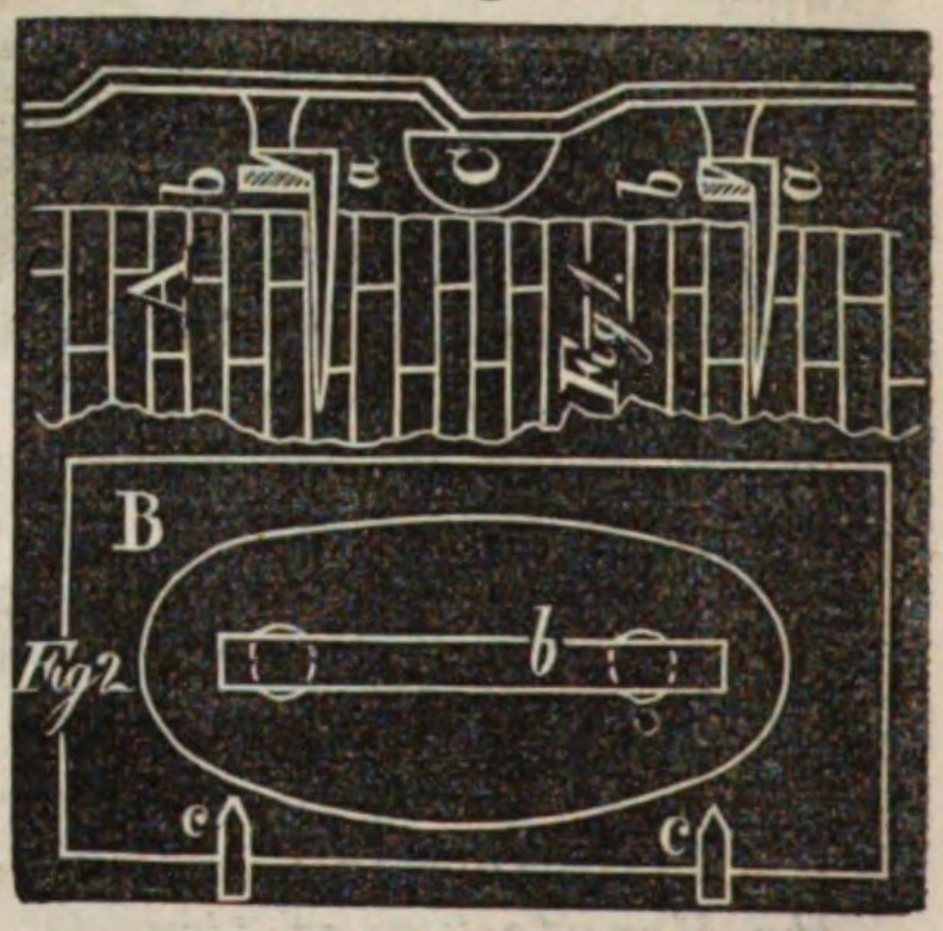
The nature of this invention consists in the application to the rudder-head of a lever or brace which is permitted to turn freely upon a pintle or centre projecting from the deck of the vessel, which lever is connected to the rudder-head by arms with hinge joints, by which means the rudder-stock is caused to turn freely in the opening in the deck, thus giving the rudder an additional support, and rendering it more secure and safe in its position.

B is the rudder-head; C, the tiller; D, a lever vibrating upon the pintle E, projecting from the deck; F, a portion of a metallic ring; G, arms.

Claim.—The brace D, connected with the rudder. Also, the combination of the brace D with the elliptical tiller H (not shown in fig.), or any other analogous device for the purpose of actuating the rudder, by the application of power to the braces, instead of to the rudder itself.

No. 9,937.—Michael B. Dyott, of Philadelphia, Pa.—*Improvement in Facing or Veneering Buildings.*—Patented August 16th, 1853.

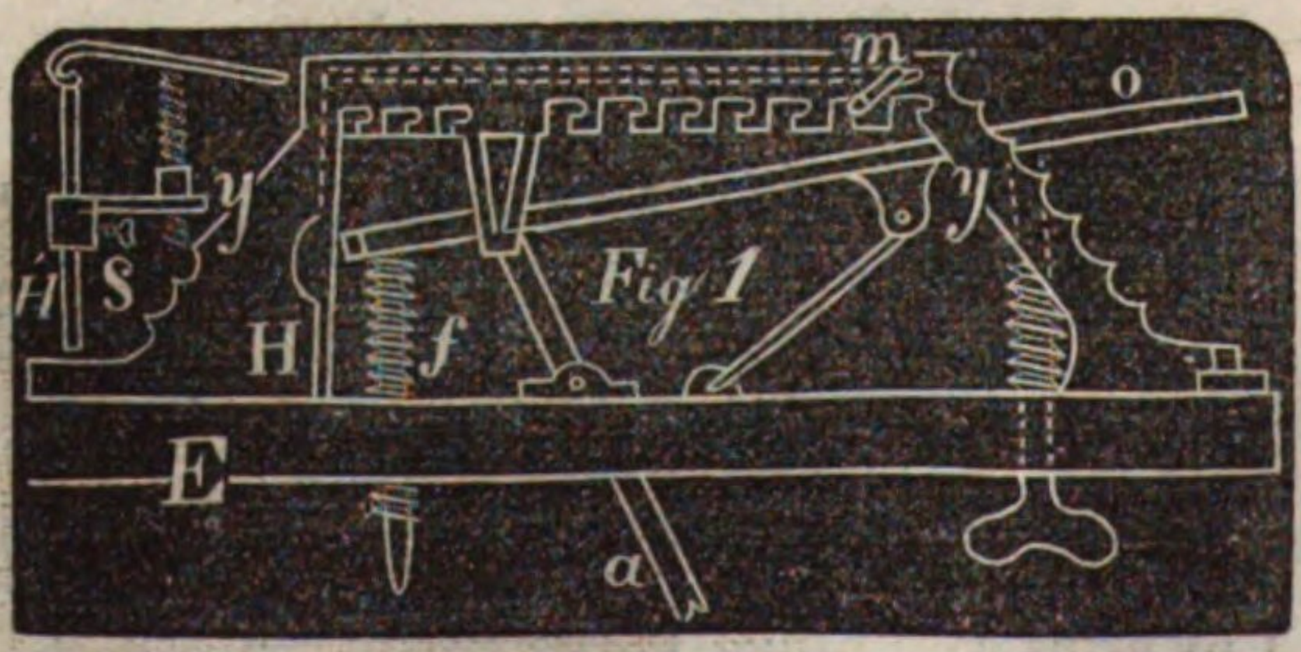
The plates B are hung to the wall by loops *b*, upon spikes and projections *c c*, which latter are cast on the iron plates.



Claim.—The method of supporting a veneering of thin cast-iron or other plates upon their inside, and uniting the same firmly with the external surface of the building, by so fixing the plates in relation to the wall as to leave a sufficient space between them to allow a cement in a liquid form to be poured in, to fill the space and all the interstices of the plate perfectly, solidify around and upon the hooks and other fastenings, and exclude the air and all dampness, whereby the veneering is strengthened, protected, and preserved.

No. 9,938.—Aaron W. Geaheart, of Beallsville, Ohio.—*Improvement in Machines for preparing Spoke Timber.*—Patented August 16th, 1853.

The timber for the spoke is laid on the bench *o*, with one end against the fixed rest, and the bridle in contact with the other end; the operator, seated on the bench E, with his foot on the lever *a*, causes the



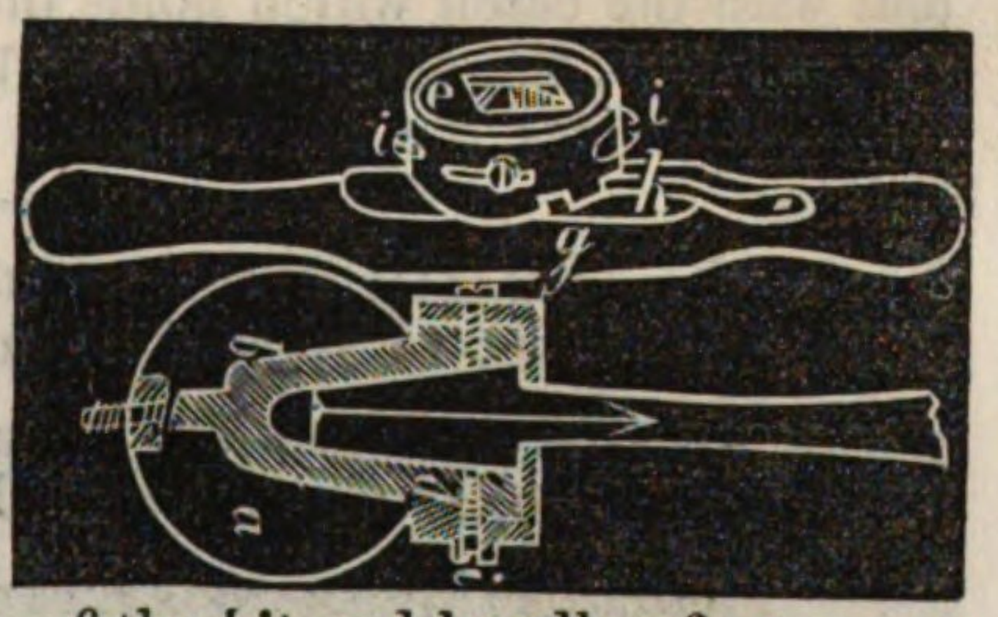
sliding ways *y y*, carrying the bridle *m* to move towards the rest, and securely clamp the piece of timber; the ordinary drawing-knife is then applied. The adjustable bench *o*, the height of which is regulated by the screws *f f*, gauges the amount to be taken off of the timber. After dressing any desired number, the bench *o* is raised and adjusted for

thickness of the spoke. To give the necessary taper, one end of the bench is raised higher than the other.

By an additional device (fig. 2), which is to be placed on H, the bevel may be given the tenon end of the spoke, by which the dish of the wheel is obtained.

Claim.—The arrangement of the adjustable bed *o*, the bridle or clamp *m*, the sliding guide or gauge *y*, and foot-lever *a*, for the purpose, and operating in the manner set forth.

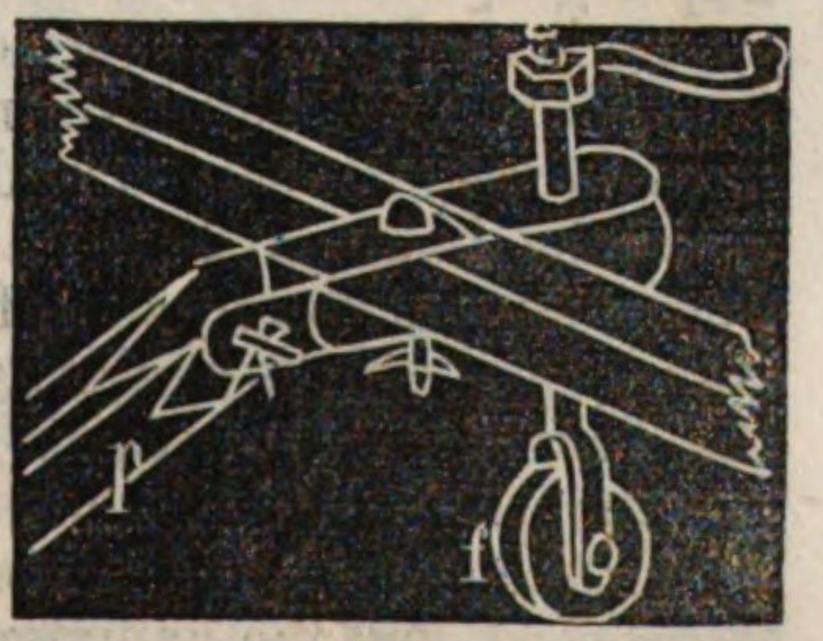
No. 9,939.—ARSHAL H. MCKINLEY, of Higginsport, Ohio.—*Improved Socket for Auger-Handles and Braces.*—Patented August 16th, 1853.



a is the handle; *b*, the socket; *d*, the circular head, with the cap *e* secured to the head by means of screws *i*, passing through slots; *h*, a spring attached to the handle, passing through notches *f g*, holding the cap in its place.

Claim.—The peculiar arrangement of mechanism by which I enable the shipping and unshipping of the bit and handle of an auger or other boring tool; that is to say, the socket having a circular head and vibrating cap, whose aperture can be made at one position to coincide with the mouth of the socket, and in the other position to oppose its straight edges to the projecting corners of the shank, the cap being retained in the desired position by spring and notch, or their equivalents.

No. 9,940.—JACOB MUMMA, of Mount Joy, Pa.—*Improvement in Draught Apparatus of Seed-Planters.*—Patented August 16th, 1853.



This improvement consists in combining a tongue (see fig.) having a vertical and lateral motion, with a supporting and directing wheel, so as to relieve the horses from the strain they are subjected to in other drills, and to enable the operator to run the drill straight forward, and keep it in its course when the horses deviate considerably.

Claim.—The combination of a tongue, having motion vertically and laterally, with the directing and supporting wheel, substantially as set forth.

No. 9,941.—E. K. ROOT, of Hartford, Conn.—*Improvement in Compound Screw-Drop or Hammer.*—Patented Aug. 16th, 1853.

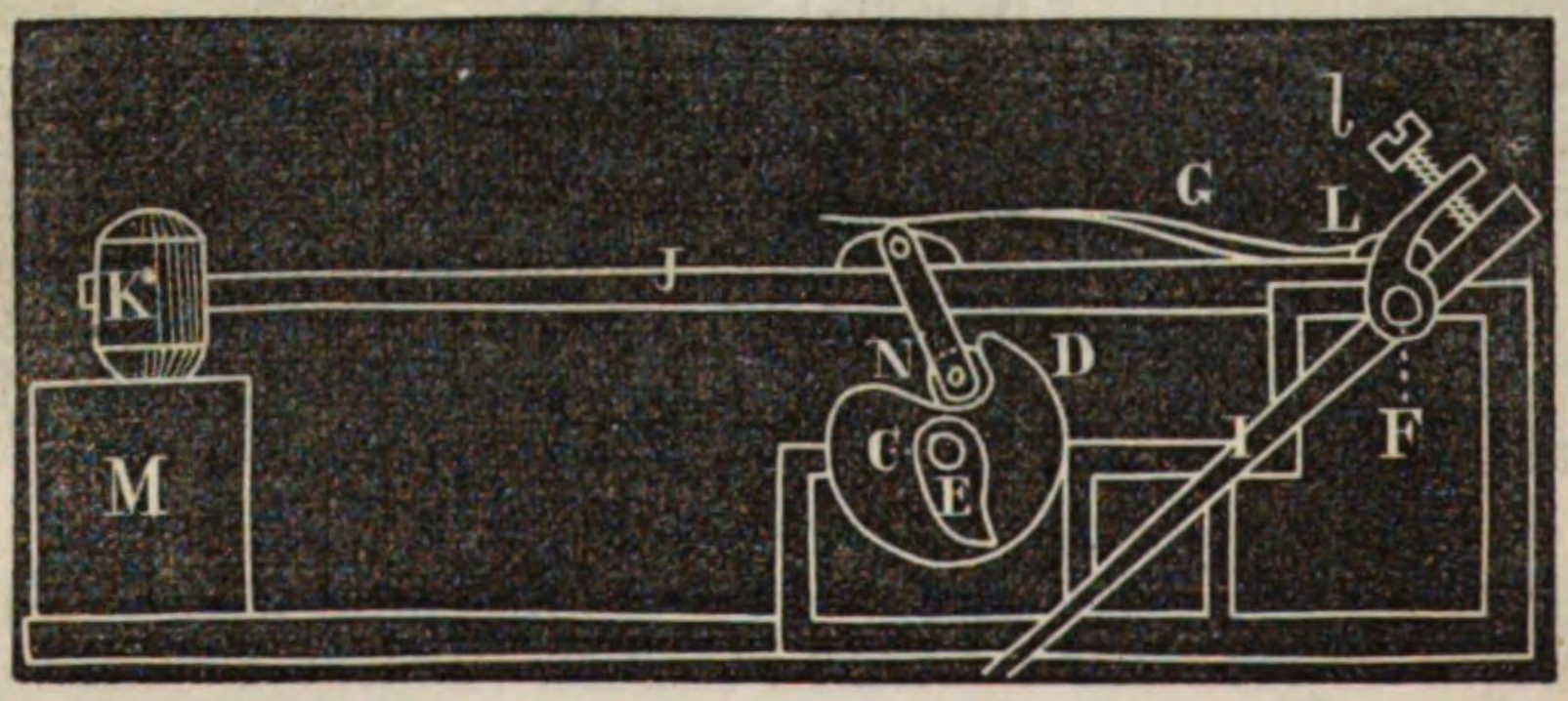
The claim explains this improvement.

Claim.—The method of elevating the drops or hammers, by means

of a screw having a continuous rotary motion, in combination with the mechanism for disconnecting the drops or hammers from the screw to permit them to drop. Also, the method of disconnecting the drops or hammers by the rotation of the elevating screw, which is notched to catch and act upon the finger or its equivalent, connected with the slide or its equivalent, to force it back and clear the thread of the screw. Also, in combination with the slide which connects the drop or hammer with the elevating screw, and with the finger on the slide or their equivalents, the employment of a catch-lever for holding up the drop or hammer when it is liberated from the elevating screw, and there holding it until it is required to be dropped. Also, in combination with the slide which forms the connection with the elevating screw, and with the catch which holds the slide when liberated from the elevating screw, the employment of the rebound latch, or its equivalent, which liberates the parts by the rebound when the drop or hammer strikes.

No. 9,942.—William Van Anden, of Poughkeepsie, N. Y.—*Improved Trip-Hammer.*—Patented August 16th, 1853.

This improvement consists in having the hammer-shaft J (see fig.) attached to a collar which works loosely around the shaft F, to which

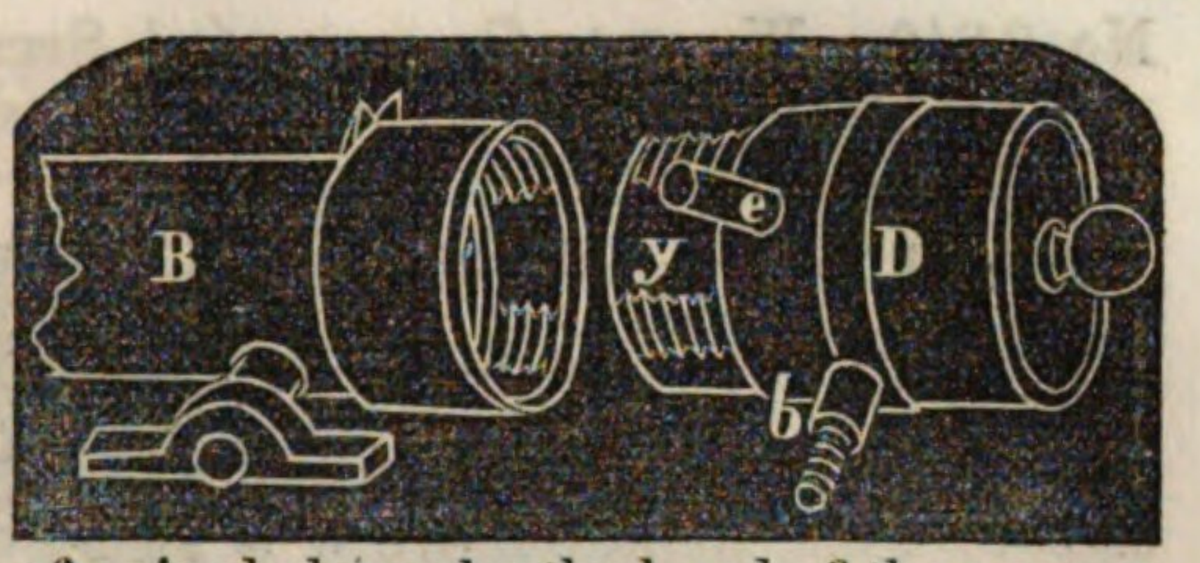


a spring G, which forces down the hammer-shaft J, is attached. The spring is made to act more or less upon the hammer-shaft, by means of a set-screw *b*, and lever I, against which the cam D operates, which rotating with the shaft C, and bearing against the friction-rollers N N, elevates the hammer-shaft J; the cam E, as it rotates, bears upon and depresses the lower end of the lever I. The upper end of lever I consequently bears against the set-screw *b*; and the shaft F, to which the spring is attached, is turned. The spring G bears upon the hammer-shaft J; and when the highest points of the cam D have passed the friction-rollers N, the spring G, of course, forces the hammer-shaft downward, and the hammer K strikes the anvil M. The pressure upon the hammer-shaft is varied by raising or depressing the set-screw *b*.

Claim.—The claim of the inventor is substantially embraced in the foregoing description.

No. 9,943.—John P. Schenkl, of Boston, Mass.—*Improvement in Breech-loading Fire-Arms.*—Patented August 16th, 1853.

This invention consists in a method of unscrewing the breech from the barrel and withdrawing the same; of turning up the breech, so as



to bring its chamber into a vertical position for loading, and then returning the breech into the barrel and locking the two together; which motions are performed through the intervention of appropriate cams, catches, and springs, by the motion of a single lever by the hand of the gunner.

The figure represents the barrel B and breech D, with the male and female screws, with sections *y* of the threads cut away. The apparatus for accomplishing the above operations is attached to the ring D and in *e* and *b*.

Claim.—The above-described combination of parts, for the purpose of operating the movable breech.

No. 9,944.—William H. Babbit, of Waynesburg, Pa.—*Improvement in Hill-side Ploughs.*—Patented August 16th, 1853.

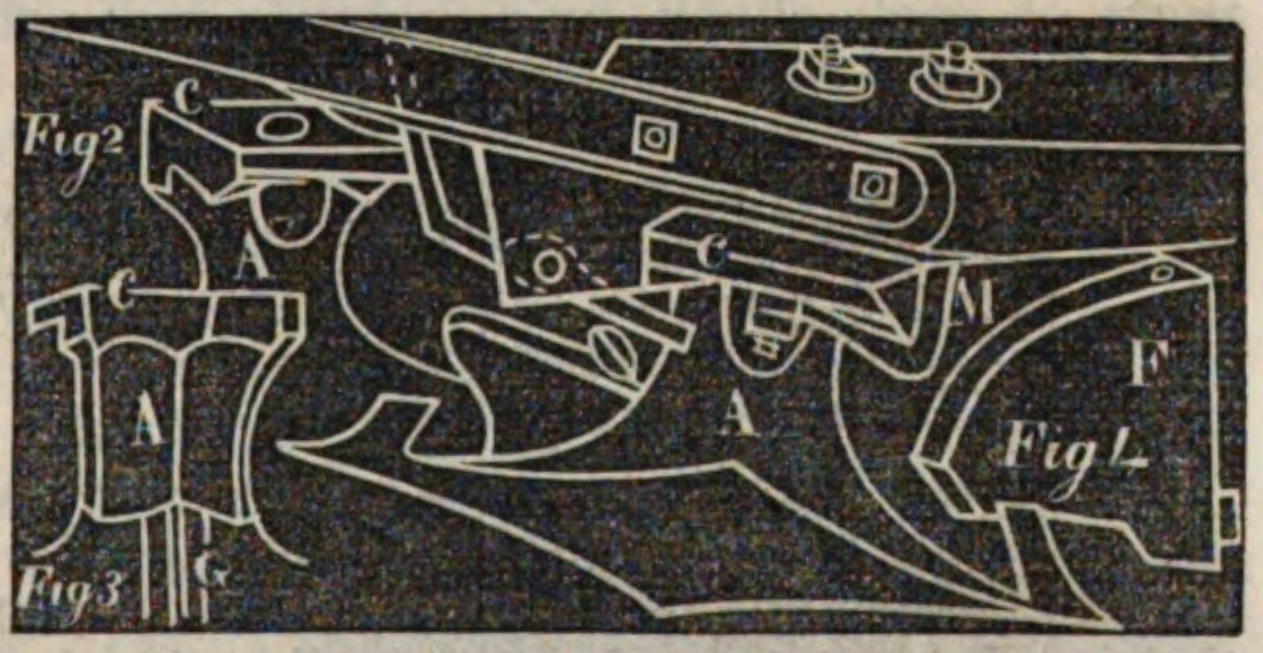
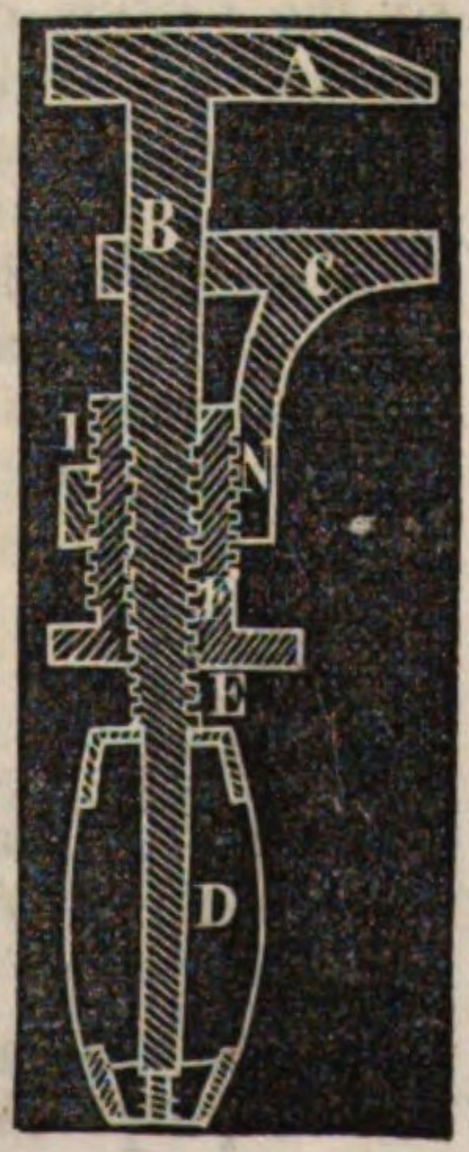


Fig. 1 represents a perspective view of the plough body and a portion of the beam; C, the head; A, the upright; M, the bolt; O, the lever; and F, the mould-board: M and O forming the lock by which the plough body is kept in proper position.

Fig. 2 shows the construction of the head C and the hole for the bolt.

Fig. 3 shows the head, with the groove G in which the mould-board works. The mould-board is shown in fig. 4.

Claim.—Constructing and arranging head C in the hinge which connects the beam with the upright A, so as to lock the hinge by means of bolt M before the pivot of said hinge, and by lever O behind the pivot, for the purpose of making the bearings in the hinge adjustable.

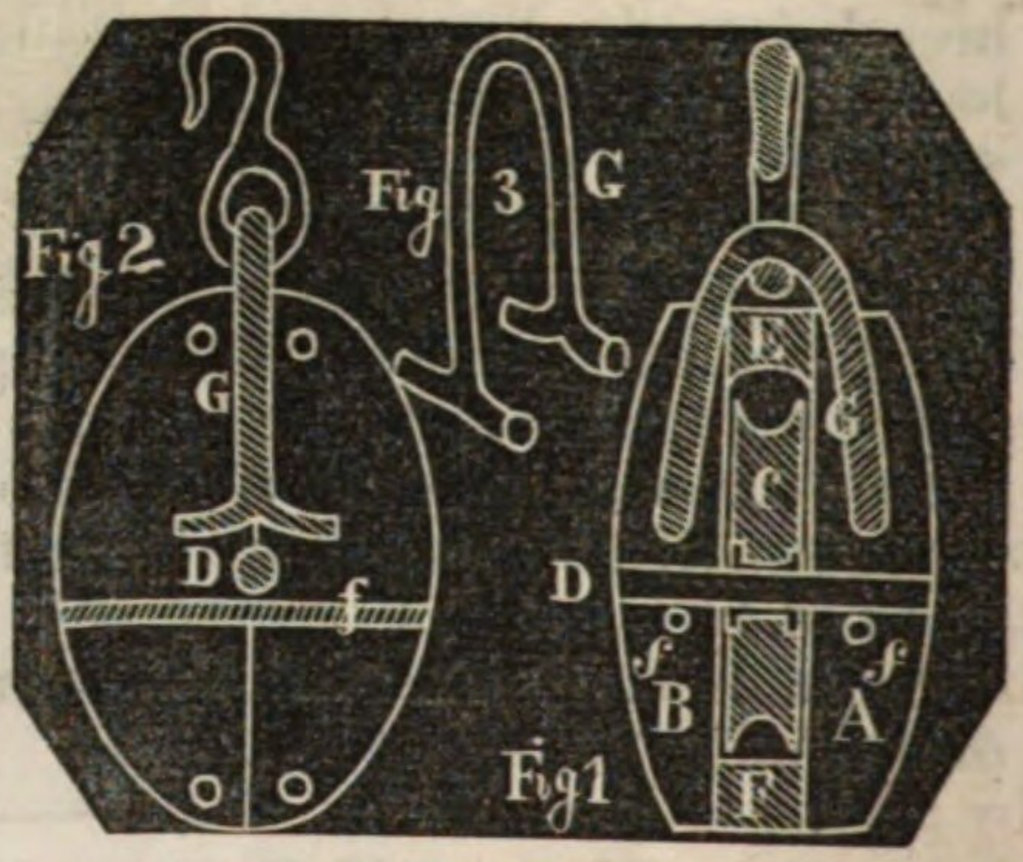


No. 9,945.—Aury G. Coes, of Worcester, Mass.—*Improved Screw-Wrench.*—Patented August 16th, 1853.

The figure represents a section of this wrench.

Claim.—The combination and arrangement of the screw-tube G, its male and female or external and internal screws I F, the screw E on the shank B, the annulus and its female screw, as applied to the sliding jaw; the whole being made to operate together, for the purpose of enabling a person to readily move the sliding jaw C on the shank, with the velocity compounded of the velocities of motion of two female screws on two male screws.

No. 9,946.—William Coleman and Stephen G. Coleman, of Providence, R. I.—*Improvement in the construction of Ships' Blocks.*—Patented August 16th, 1853.



A and B represent the two cheeks; C, the sheave; D, the sheave-pin; and E F, wooden connecting pieces; and instead of straps, the staple or eye G is employed.

Claim.—The mode of constructing the hook-and-eye staple of the block, and supporting it within and by means of the cheeks, without any extension of it around and in contact with the sheave-pin, and whether each of the cheeks is made whole or in two parts; and in combination therewith, the mode of sustaining the sheave-pin, and connecting the two parts of each cheek, by a metallic rod extending through them and directly under and against the sheave-pin.

No. 9,947.—Alpheus C. Gallahue, of Alleghany City, Pa.—*Improvement in Machines for Pegging Boots and Shoes.*—Patented August 16th, 1853.

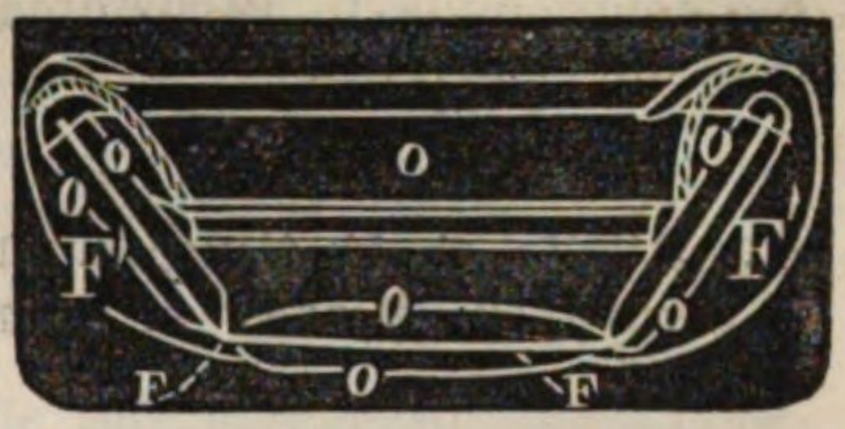
Claim.—The sliding-lever having a hook for entering the staple of the last, which, passing through slots in the uprights of the turn-table, secures the last to the table by the introduction of the wedge. Also, the turn-table mounted on the slide-table, which works on ways upon the moving-table, and is actuated by springs, for the purpose of keeping the edge of the sole at all times in contact with the gauge, when this is combined with mechanism for giving the turn-table a semi-revolution at the point where its centre is brought opposite to the awl by the motion of the table, that regularity in inserting the pegs may be secured. Also, the combination of the spring, lever, catch, or their equivalent sliding-wheels, and racks and mitre wheels, by which a semi-revolution is given the turning-table while the pegs are being inserted around the heel by the shifting mechanism. Also, the mechanism by which a driving stroke is given the peg-driver and the awl. Also, giving the peg-tube and driver a side motion, independent of the awl and awl-rod, by means of the cam and lever. Also, the combination of a cam and stirrup with the swing peg-cutter, by which the peg-wood is split from below by the knife, and at the same time forced into the tube.

No. 9,948.—Gibson North, of Philadelphia, Pa.—*Improvement in the Oven-doors of Cooking Stoves and Ranges.*—Patented August 16th, 1853.

The nature of this invention consists in enamelling the oven-doors, for the purpose of retaining the heat.

Claim.—The application of an adhesive coat of enamel, or other substance answering the same purpose, to the inside of the oven-doors of ranges or cooking stoves.

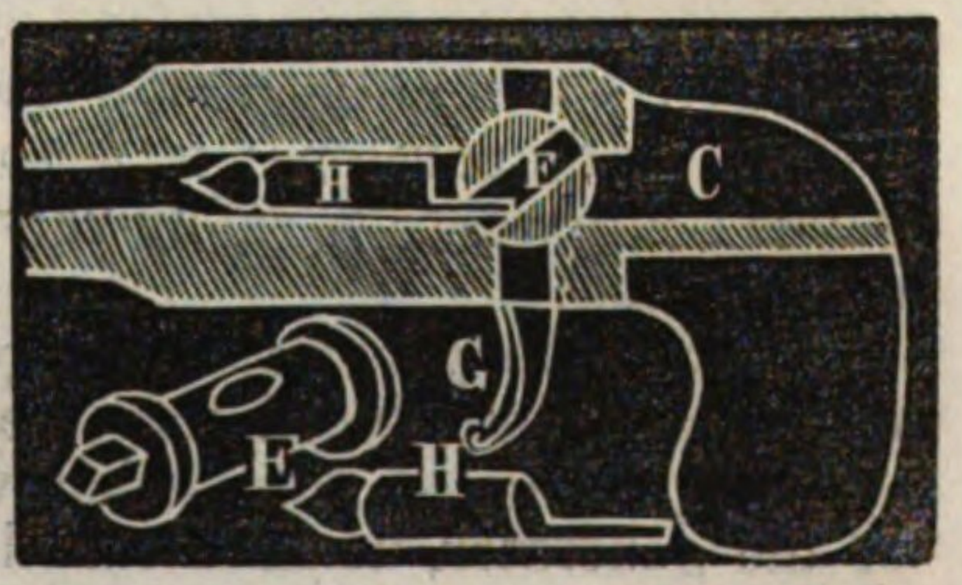
No. 9,949.—ABIJAH R. TEWKSBURY, of Boston, Mass.—*Improved Boat or Scow.*—Patented August 16th, 1853.



This boat is made of a sheet of india-rubber F, or other flexible water-tight material, lined, and covered with boards, so hinged together that the sides and ends will fold together upon the bottom of the boat, so as to require but little room for storing.

Claim.—The above-described method of constructing a boat, viz: by attaching its sides and ends to its bottom by water-tight hinges, in combination with connecting the edges of the sides and ends by water-tight flexible gores, so that the boat may be unfolded, or the sides and ends turned down into the plane of the bottom thereof.

No. 9,950.—HENRY STANTON, of U. S. Army, N. Y.—*Improvement in discharging Breech-loading Fire-Arms.*—Patented August 16th, 1853.



The nature of this invention consists in constructing a movable breech in such a manner that it will, when placed in one position, form a prolongation of the bore, to allow the load to be introduced through it into the chamber; and, when placed in another position, will close the but-end of the bore, igniting at the same time the charge, by shearing or cutting off the fulminating fuse attached to the cartridge, as shown in the figure. C represents the chamber; E, the cylindrical plug, with the aperture F; G, the trigger; H, the cartridge, with the fulminating charge or fuse attached.

Claim.—The method herein described, of firing the charge of breech-loading fire-arms by the breech itself, in the act of closing; thereby dispensing with the ordinary lock. Also, the method of igniting the charge, by shearing through the fulminating compound attached to the cartridge.

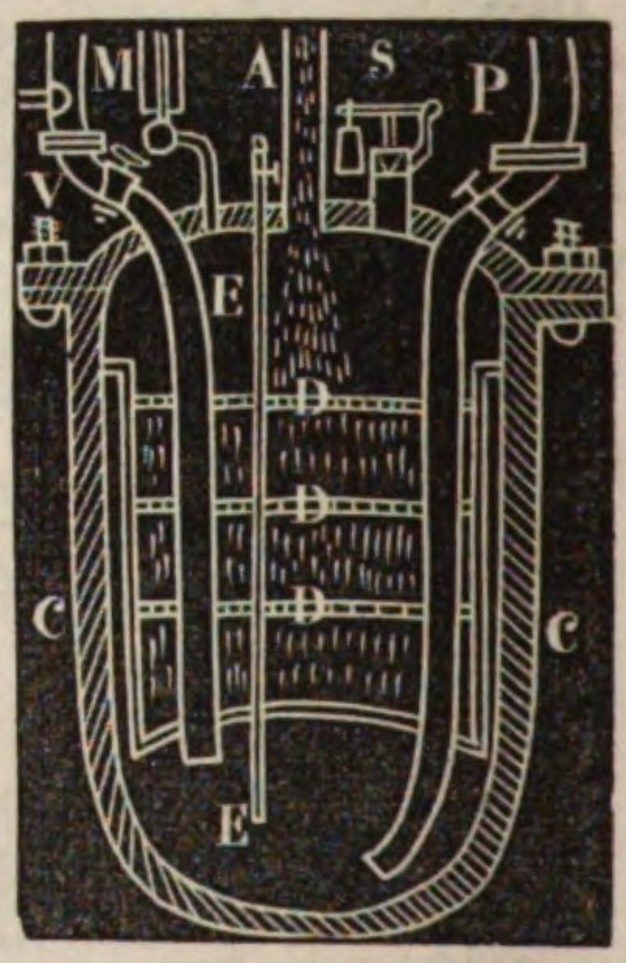
No. 9,951.—LUTHER ATWOOD, of Boston, Mass.—*Improvement in processes for purifying Alcohol.*—Patented August 23d, 1853.

This invention consists in the employment of finely-ground manganese oxide, 3 lbs.; nitrate of potash or nitrate of soda, 5 lbs., in a moistened state; to be slowly melted in a crucible; continuing the heat until the melted mass passes from a fluid to a stiff pasty condition. When cold, it is powdered and kept for use.

For every gallon of alcohol, of 85 or 90 per cent., two ounces of the manganese compound, dissolved in eight ounces of water, are used. This proportion is the average quantity for common alcohol; but so much should be used as is sufficient to destroy the odor of the fusel or odorous oils. The alcohol is then distilled.

Claim.—The use of manganates and permanganates existing in soluble compounds, however obtained, for purifying alcohol, so as to adapt it to nice purposes.

No. 9,952.—J. B. MOINIER and P. H. BOUTIGNY, of Paris, France.—*Improved Method of generating Steam.*—Patented August 23d, 1853.



The nature of this invention consists in so forming the generator as to cause a direct production of steam at high temperatures—500° or upwards—by means of ejecting water at the top, or near the top of the generator, when the same is in a heated state, and causing the water to come in small quantities in contact with the surfaces of perforated metallic diaphragms, placed within the generator, and also to come in contact with the sides of the generator, so as to increase the evaporating surface of the generator (see fig.) A represents the feeding-pipe; C, boiler; D, diaphragms; E, set-pipe; M, steam-gauge; P, purger; S, safety-valve: V, mouth of steam-boiler.

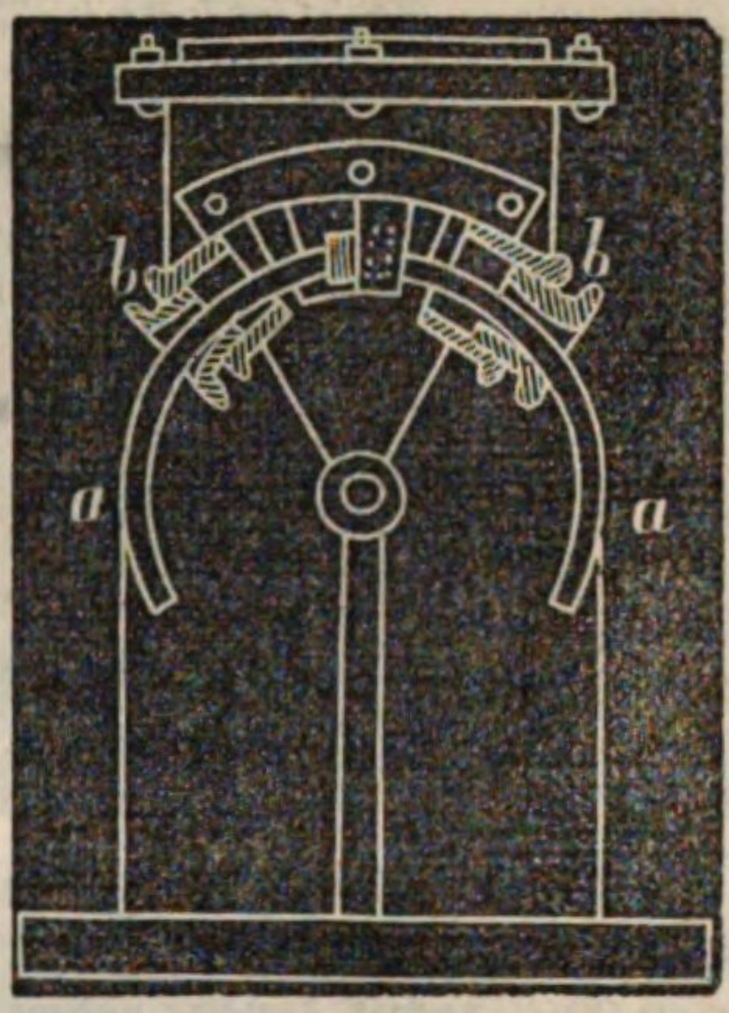
Claim.—(In generators for generating steam at high temperatures, from water introduced into the generator when in a highly heated state) injecting or introducing water from the top or near the top of the generator, when this mode of feeding or introducing the water is combined with the series of perforated metallic diaphragms, arranged one above another in the generator, so as to subdivide the water, and increase the evaporating surface, the water being gradually heated and subdivided in its passage through the apertures of the diaphragms, before it comes in contact with the more highly heated surface of the generator.

No. 9,953.—JAMES B. DUFF, of New York, N. Y.—*Improvement in the method of cutting Soap.*—Patented August 23d, 1853.

The nature of this invention consists in the employment of a traversing slatted bed, having a hinged head-piece, in combination with a series of vertical and horizontal yielding wire-cutters.

Claim.—Making the wire-knives, arranged and set with weights, capable of yielding, so that they will form a loop in passing through the soap, and consequently cut it smoothly and straight, in combination with the feeding slatted bed, or any other equivalent device for feeding or forcing the soap up to the yielding wire-knives.

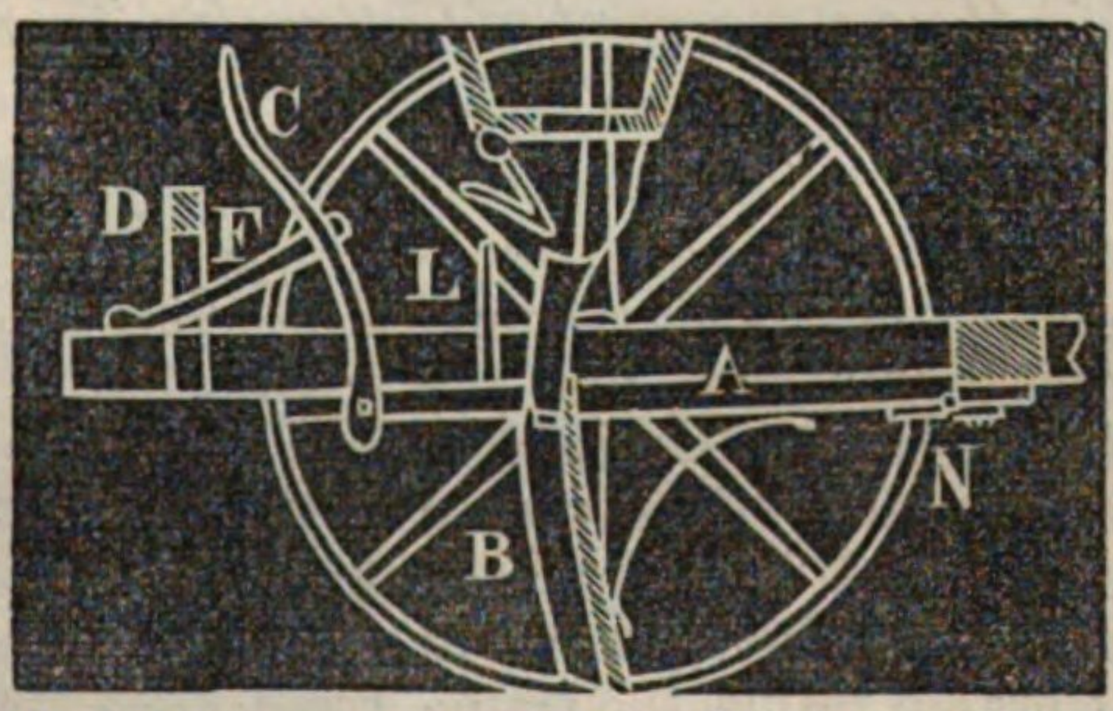
No. 9,954.—Morris J. Gardner, of York, Pa.—*Improvement in Oscillating Steam-Engines.*—Patented August 23d, 1853.



The nature of this invention consists in the manner of introducing the steam through circular tubes into the steam-chest, and at the same time constituting the tubes the circle around which the cylinder oscillates. (See fig.) *a a*, the circular tubes, being made stationary on the frame of the engine; *b b*, large circular tubes attached to the steam-chest, which contain the packing, and glide over the tubes *a a*.

Claim.—The mode of introducing the steam, the circular steam-tubes, the circular steam-chest and packing-boxes, operating in the manner described, without regard to the positions or dimensions of the various parts.

No. 9,955.—Peter Horn, of Hagerstown, Md.—*Improvement in Seed-Planters.*—Patented August 23d, 1853.

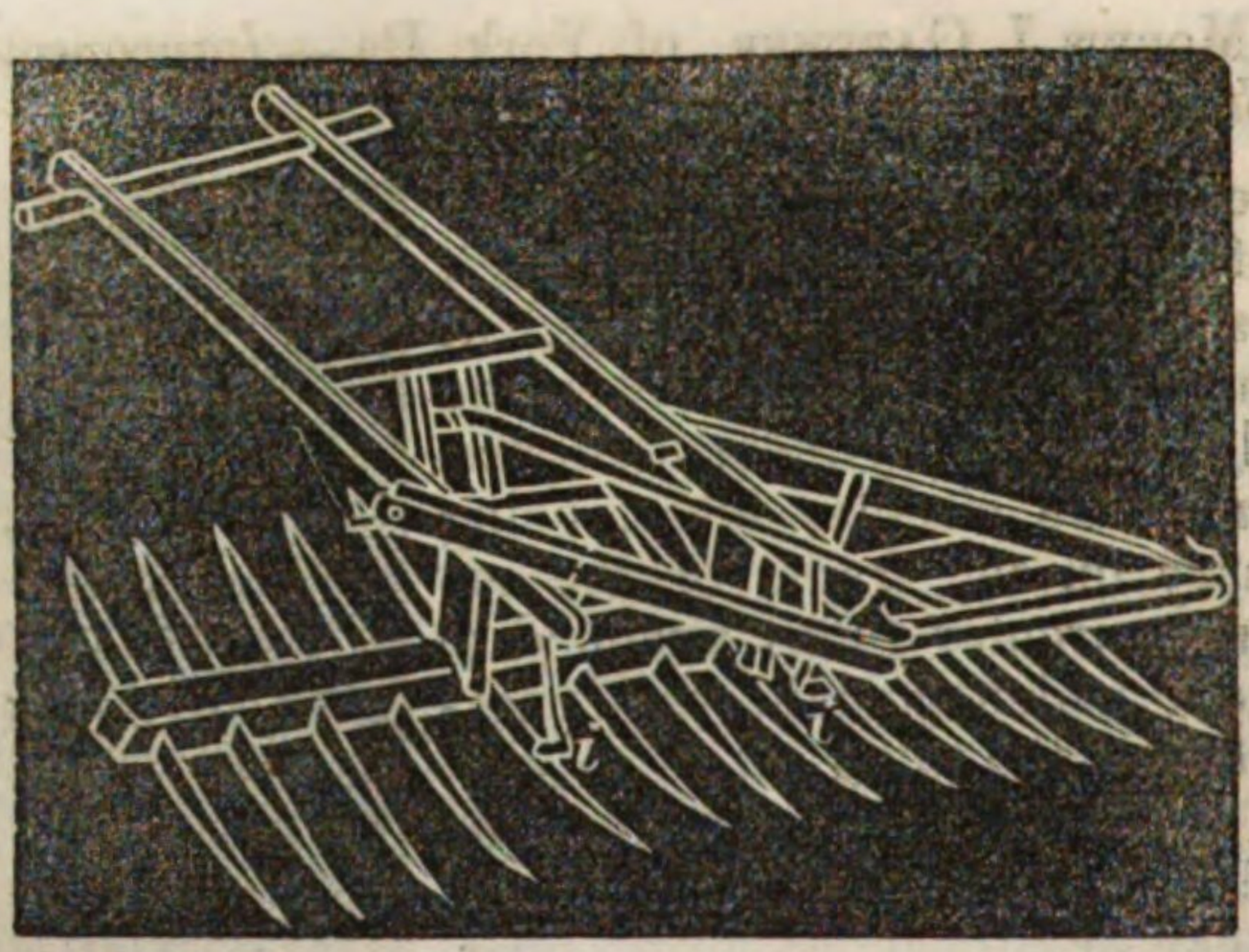


The nature of this invention consists in providing the boot B (see fig.) with an arm A, which is attached to the frame of the planter by a hinge N, and is operated by a lever C, whose fulcrum F is also attached to the frame, and by which the boot B may be lowered or elevated at pleasure. When the arm is elevated in passing over uneven surfaces, the projection L strikes the bent spring above it and raises it, thus closing the aperture through which the seed passes from the hopper into the boot, and thereby saving the grain which otherwise would be lost.

Claim.—The spring *a*, in combination with the projection L and arm or lever A, for the purpose of opening and closing the recess through which the seed passes. Also, the arm or lever A, in combination with the lever C and fulcrum F, for the purpose of raising or lowering the drill tubes and operating the spring *a*.

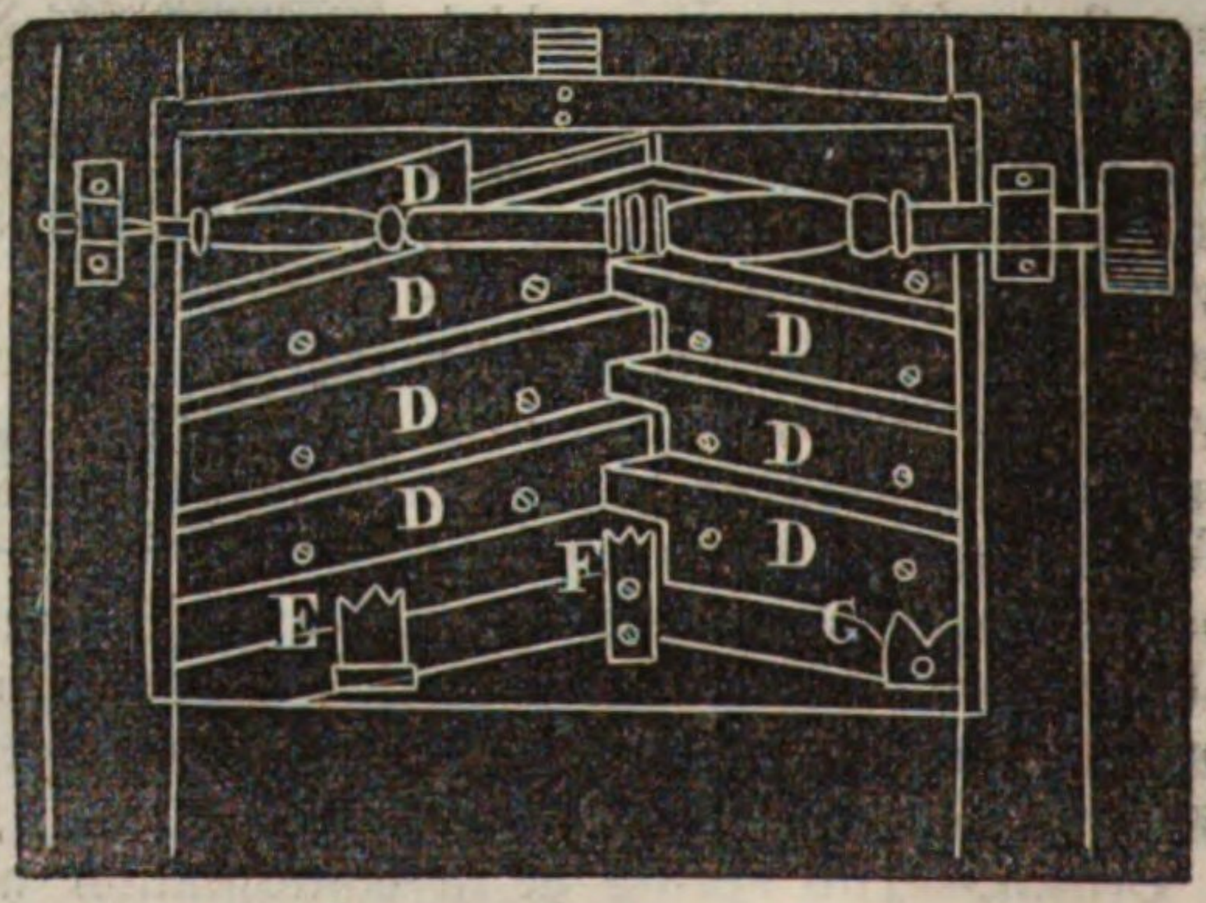
No. 9,956.—Frederick B. Parker, of Queensville, Ind.—*Improvement in Hay-Rakes.*—Patented August 23d, 1853.

The object of this improvement is to prevent the rake from tipping by any other force than that applied by the operator for the purpose; and consists in a pair of steel springs *i i* (see fig.), which are attached to the handle-bars, projecting downwards, and terminating with lips, to rest upon two of the front tines.



Claim.—The spring-catches projecting downwards from the front ends of the hand-bars, and provided with sloping lips, which, bearing upon the front tines, assist in holding the rake to its place, until relieved by the withdrawal of the main stop by the operator.

No. 9,957.—Milton Roberts, of South Levant, Maine.—*Improvement in the arrangement of Cutters for Turning.*—Patented August 23d, 1853.

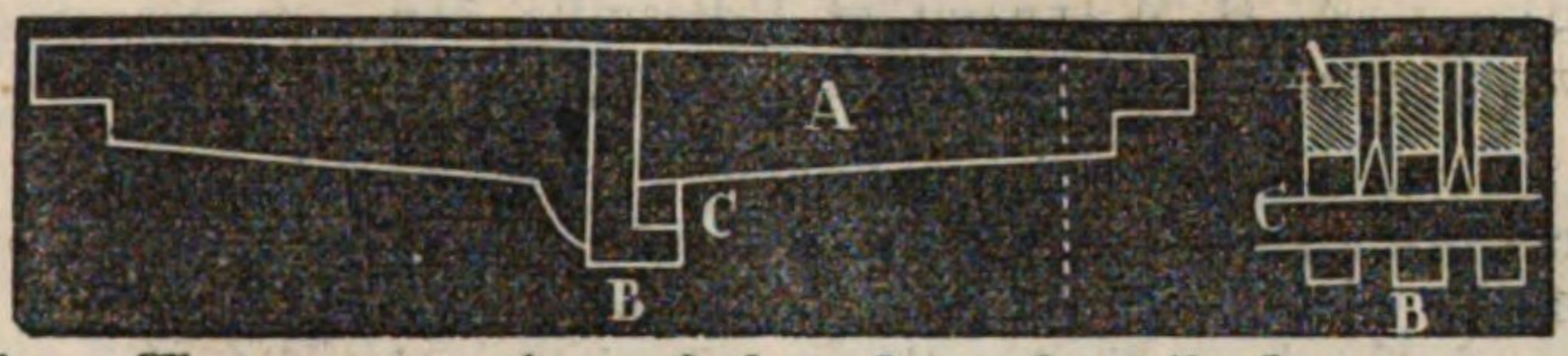


This invention relates to an improved lathe-attachment, for turning bed-posts, chair stuff, and the like; and consists in placing a series of knives or cutters and beading-tools, one or both being used in a suitable frame, the frame being moved in a direction transversely of the stick to be turned. The stick is centred in an ordinary lathe, and the frame, with its guides, are so attached to the latter as to allow the knives to come in contact with the stick as the frame is moved; the knives operating upon the stick sufficiently to give it the required form during a single stroke or vibration of the frame. In the figure, D represents two sets of knives in an inclined position; E F G are beading-tools attached to the frame at the lower part of it.

Claim.—Arranging straight-edged and grooved cutters on a frame moving parallelly to the axis of the lathe, when the cutters are placed in pairs obliquely to the piece to be turned, each set forming salient angles with each other in the frame; by which arrangement each set acts by a gradual drawing cut upon the piece, the grooved tools following, to finish the work.

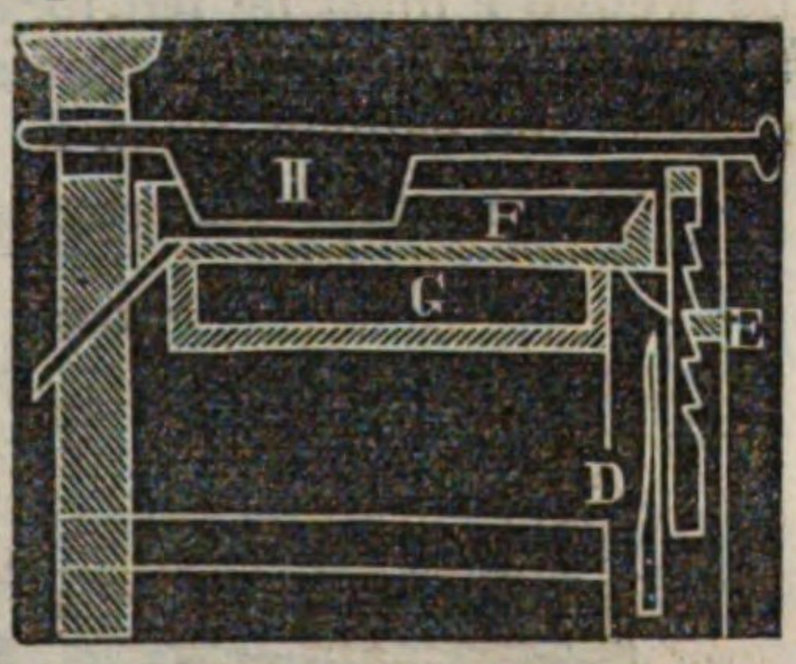
No. 9,958.—Samuel Vansyckel, of Little York, N. J.—*Improvement in Grate-Bars.*—Patented August 23d, 1853.

The nature of this invention consists in casting or otherwise securing to the under sides of grate-bars, hooks or catches, through which a rod or bar is passed and held, and by which the grate-bars are prevented from warping or twisting by the heat, or from falling down, if one end should slip off. (See fig.) A is the grate-bar; B, the catch or hook; C, the bar.



Claim.—The construction of the above-described grate-bar, as set forth.

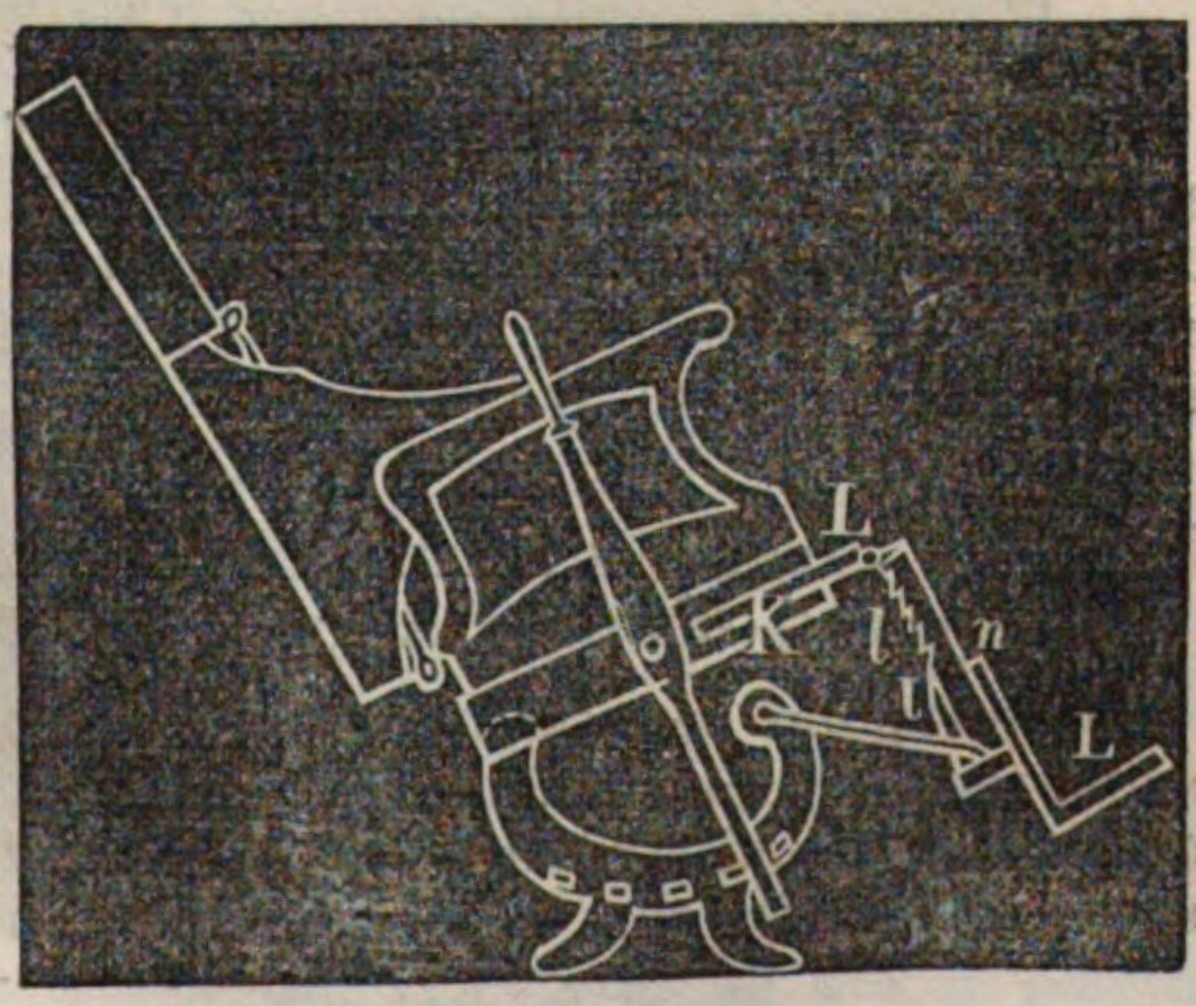
No. 9,959.—Miss Lettie A. Smith, of Pineville, Pa.—*Improved Machine for Working Butter.*—Patented August 23d, 1853.



This machine consists of the butter-tray or pan F, and the cooling-drawer G, which is placed under it, and into which ice is placed to keep the butter in a cool state while being worked. Also, of a working-apparatus, the handle of the worker H passing through a circular opening in the back of the stationary frame, and the other end extending over the front part of the tray. This adjustable apparatus or working-lever is formed with acute angles at the sides of its working face, so as to serve the double purpose of pressing the butter and turning it over.

Claim.—The combination of the cooling-drawer or ice-box G, with a butter-tray F, for the purpose described. Also, forming the working-lever with acute angles at the sides of its working face, for the purposes set forth.

No. 9,960.—William M. Warren, of Watertown, Conn.—*Improvement in Railroad Car Seats.*—Patented August 23d, 1853.



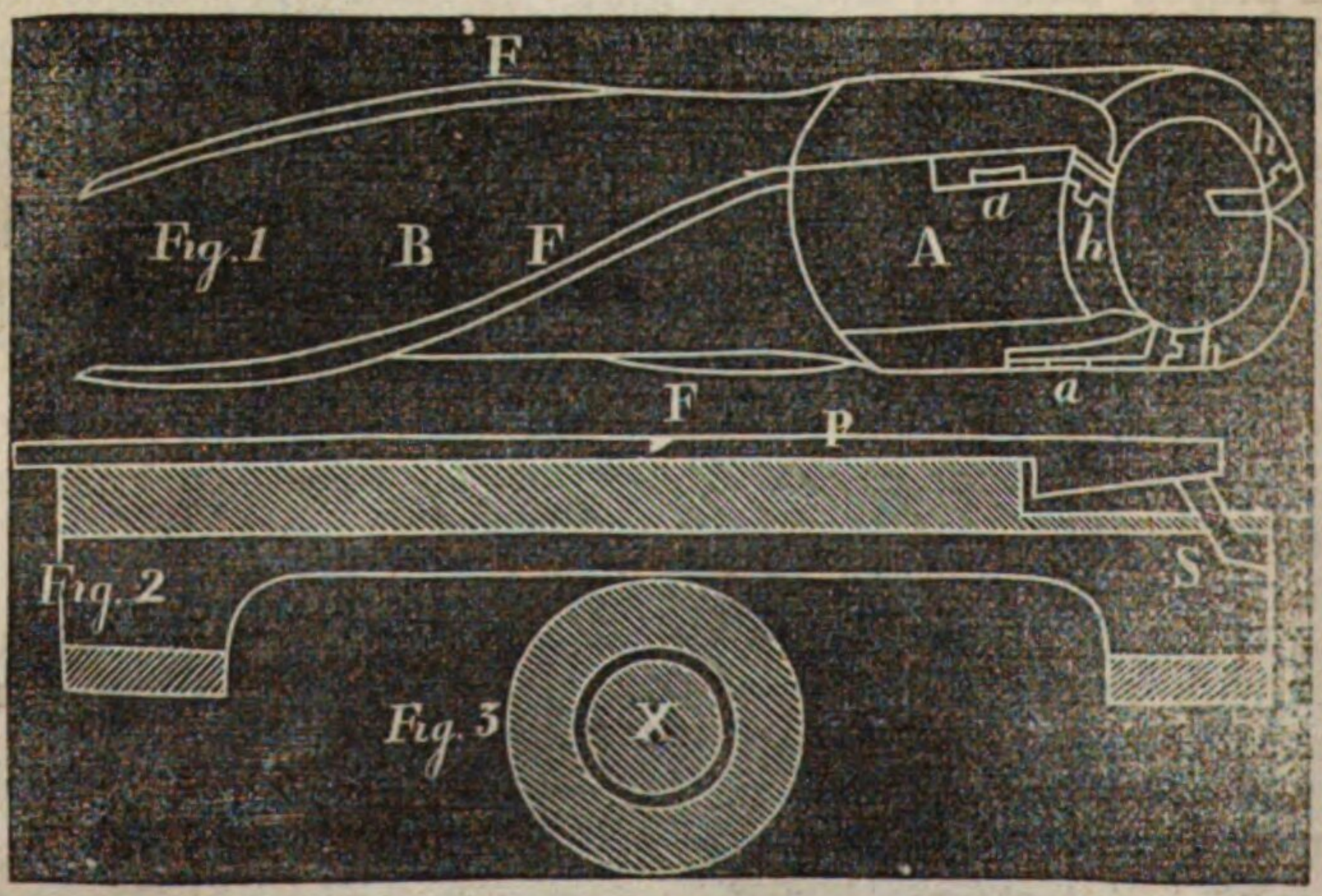
This improvement consists in the construction and use of sliding foot-boards, placed below the seat, as shown in the figure.

Claim.—The manner in which the foot-boards L L are constructed and ar-

ranged, viz., the foot-boards being attached by joints to slides K K, the slides having racks *l l* on their upper surfaces, and working on beds J J connected by hinges; the under sides of the slides being provided with spurs or clicks *n n* which catch into the racks and retain the foot-boards when pressed upon by the feet; the beds being retained underneath the seat when the foot-boards are not in use, by means of the catches, or any other convenient mode.

No. 9,961.—L. A. B. WALBACH, of Pikesville, Md.—*Improvement in Boring Cannon.*—Patented August 23d, 1853.

This invention consists in producing a cylindrical hole in any solid metal suitable for making cannon or small arms, by boring out an annulus of the diameter of the required hole, leaving a central core, which can be broken off when the annulus is completed to the required depth, and removed in a solid mass. (See figs.) X is the core; A, the cutter-head of the boring tool; *h h h*, the cutters; B, the shear; and F F F, the spiral flanges. To operate the tool s for cutting off the core, the wedge P must be fed forward upon the tool by a screw. The surface of the core will show any defects, should there be any in the metal of the cannon, upon its inner surface.



Claim.—The metnod herein described of boring cannon or the barrels of other ordnance or fire-arms, in combination with a second operation for removing the core. Also, the transverse cutter, for grooving or cutting off the base of the core. Also, the method of ascertaining the quality of the gun by testing the core.

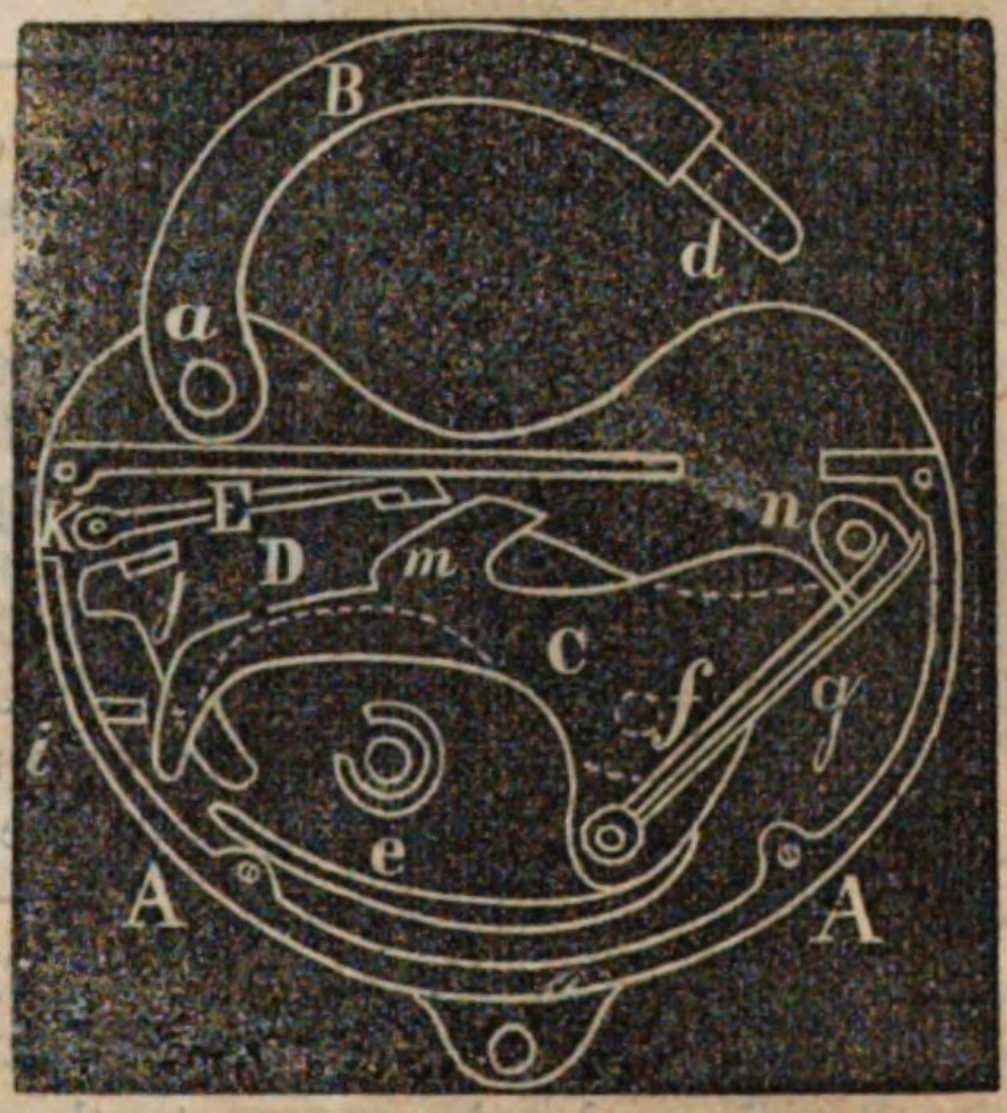
No. 9,962.—ZACHARIAH ALLEN, of Providence, R. I.—*Improvement in Counterpanes.*—Patented August 23d, 1853.

This invention consists in weaving cloth of a width equal to the length required for a counterpane, the weft of the cloth being composed of cord and thread woven in alternate order, the thread being the usual size for the warp employed, and the cord considerably

thicker: woven so as to form a ribbed surface. The thickness and twist of the cord should be such, that when woven, its tension and rigidity will produce kinks by its tendency to untwist, which will form helicoidal curves, and give the ribs a wavy and undulating surface.

Claim.—The ribbed counterpane herein described, being so made that the thickness and twist of the cords forming the ribs, by their tendency to untwist, will give to the ribs a wavy and undulating surface.

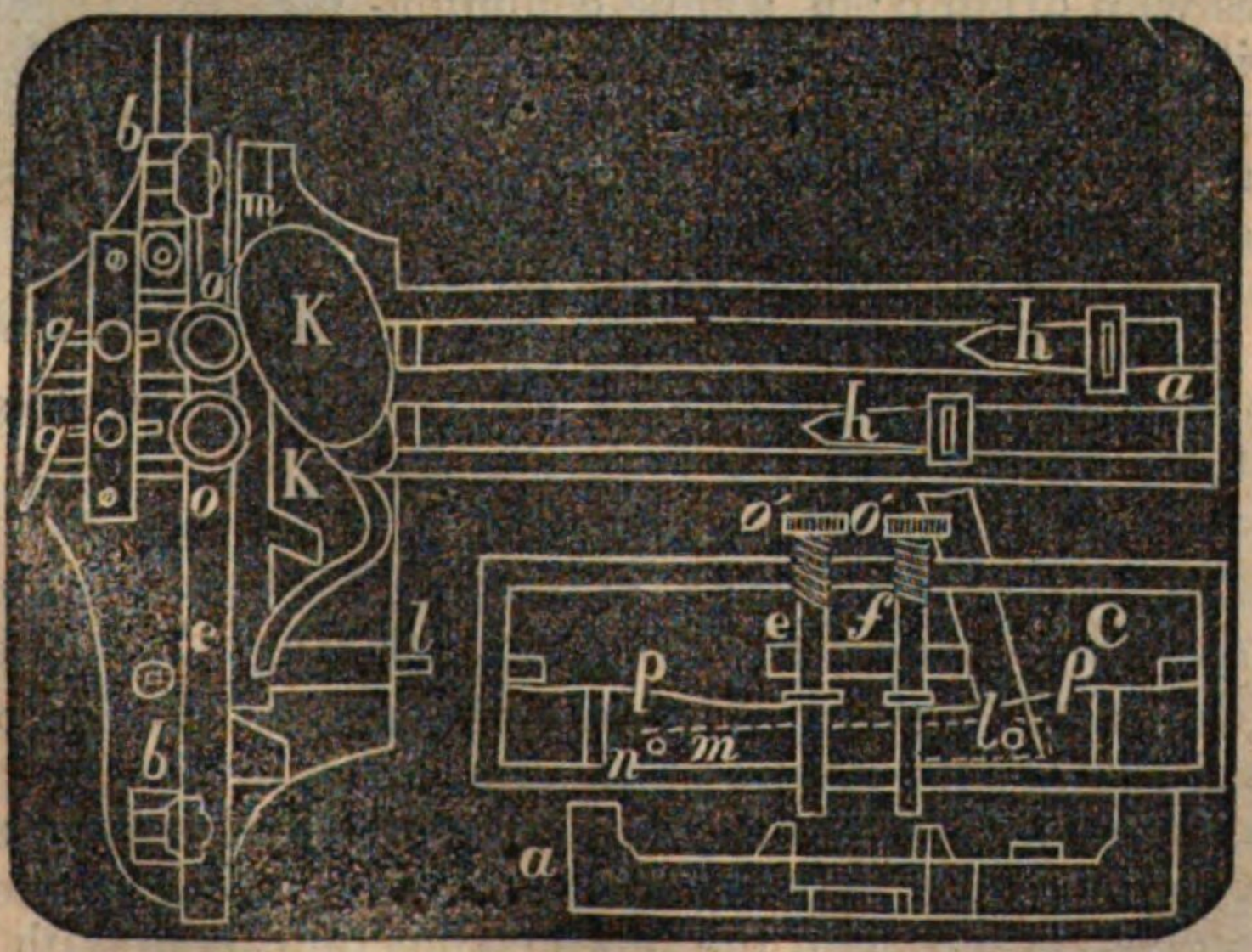
No. 9,963.—HENRY RITCHIE, of Newark, N. J.—*Improvement in Padlocks.*—Patented August 23d, 1853.



This improvement consists in the combination of a bolt, toothed tumbler, and guard, so arranged as to prevent the bolt from being forced from the shackle in the bow by means of blows upon the case of the lock. A represents the case; C, the bolt; D, the tumbler; and E, the guard or lever, having its fulcrum on K.

Claim.—The combination of the bolt C, guard E, and the double-toothed tumbler D, one tooth *n* of the tumbler fitting in the shackle *d*, and the other tooth J fitting in the notch at the back of the bolt. The bold, guard, and tumbler operating as set forth in the body of the specification.

No. 9,964.—SNOW MAGOUN, of Newton, Mass.—*Improved Machine for Cutting and Bevelling Printers' Rules.*—Patented August 23d, 1853.



The strip of metal from which the rule is to be cut is placed

upon the bed-piece *a*, and rigidly held by the set-screws *g g*, and at the end by the slides *h h* fastened in any desired position by set-screws. The tool-carriage *c c* is moved forward and back across the bed-piece *a*, by the handle K K, turning on a fulcrum at *l*, and jointed to the arm *m*, which is attached to the tool-carriage at *n*. The tools are depressed as the cutting progresses by the screws *o o*, and raised up again, when the screws are relieved from the tools, by the springs *p p*.

Claim.—The machine above described, having, or being constructed with, a sliding tool-carriage, which carries the cutting tool forward and back across the rule.

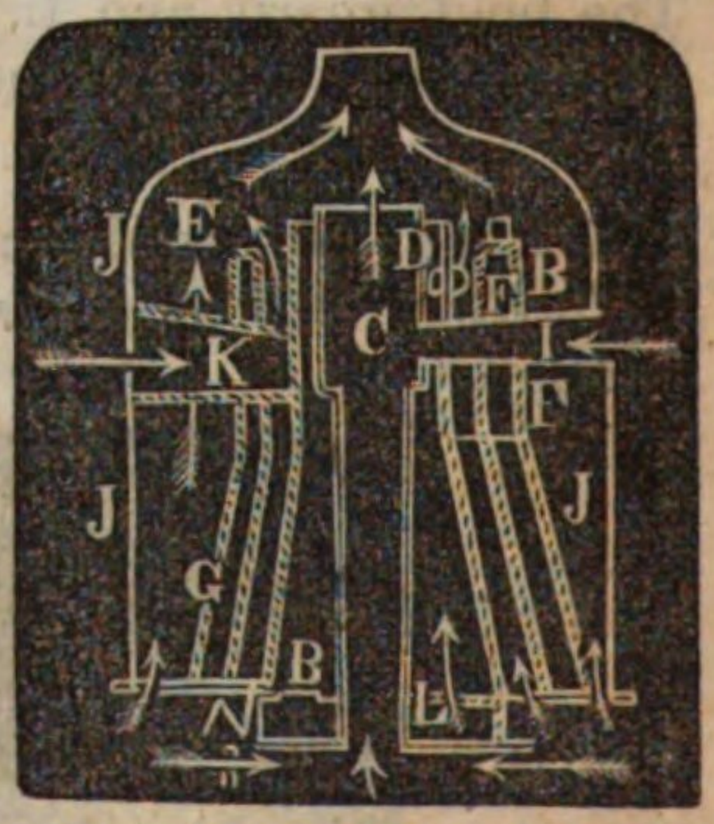
No. 9,965.—JONATHAN FOREMAN, of Boston, Mass.—*Improvement in Diving-Bells.*—Patented August 23d, 1853.

The peculiarity in operation of this invention is, that by the combination of a reservoir of condensed air at the surface, in communication with the diving chamber and the traversing block, it is practicable at all times so to regulate the equilibrium of internal and external pressure, as to control the movements of the bell.

Claim.—The combination of the compressed-air reservoir at the surface, in connection with the diving chamber or bell, and the arrangement of the movable block or pulley, whereby the chamber or bell may be moved and directed at the will of the operator within.

No. 9,966.—M. B. DYOTT, of Philadelphia, Pa.—*Improvement in Hot-air Furnaces.*—Patented August 30th, 1853.

(See figure.) A represents the fire-chamber; B, the fire-grate; C, a cylinder or flue; D, a passage from the fire-chamber into a drum E; F, a pipe passing through the drum, serving as a partition to cut off the communication all around the interior of the drum, and communicates with drum G; H, a pipe communicating with drum G and drum E; I, pipes which pass from the upper part of the inner cylinder or flue C to the outer side of the external shell or covering J; K, the door; L, ash-pit.



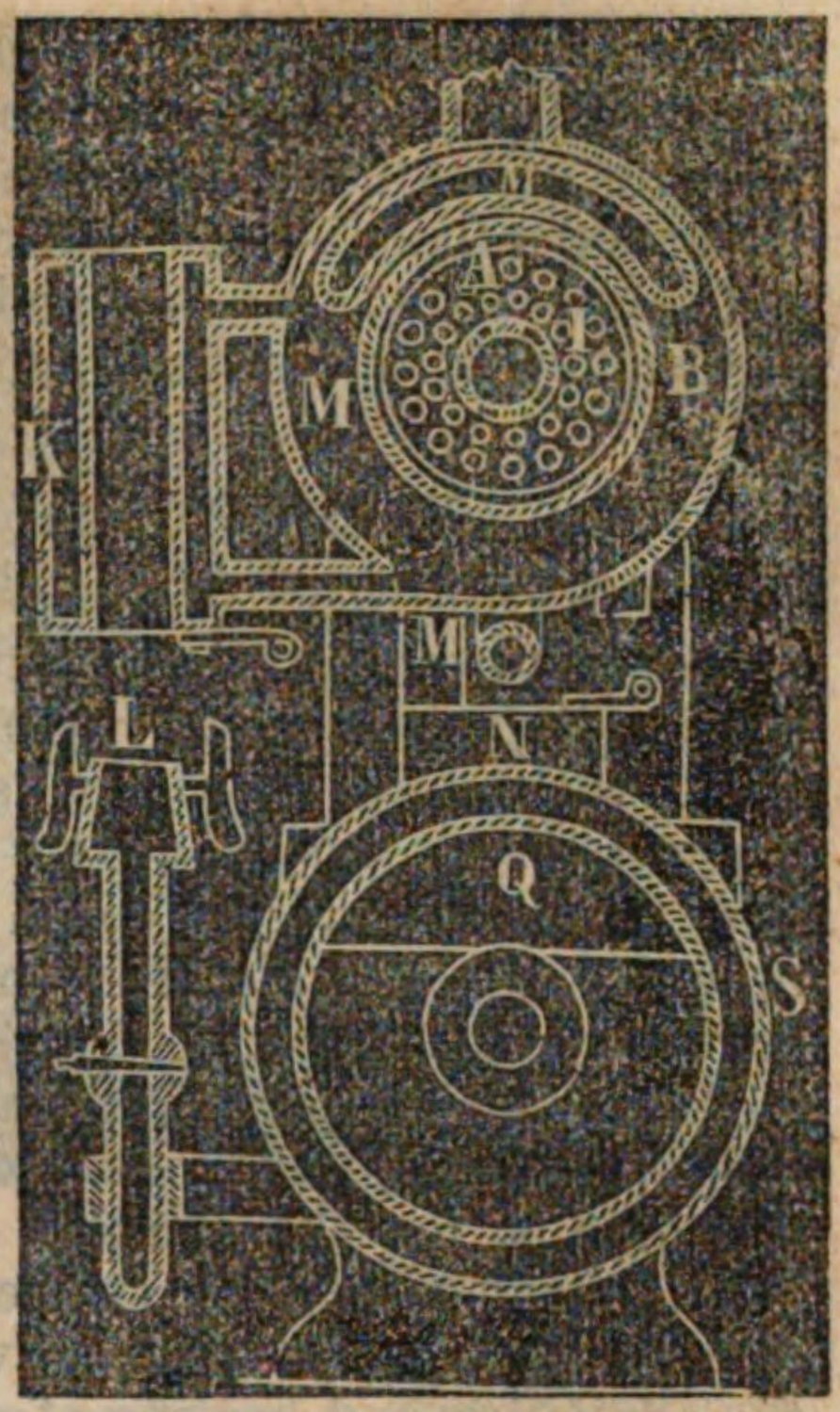
Claim.—The combination of the internal cylinder C, with the drums E G, arranged in the manner described; by which combination a great amount of heating surface is exposed.

No. 9,967.—OLIVER P. DRAKE, of Boston, Mass.—*Improved Apparatus for Vaporizing Benzole.*—Patented August 30th, 1853.

The claims of the inventor, by reference to the accompanying figure, will explain the nature of this improvement.

Claim.—The combination of the heater K, and gas-burner L, with the water-vessel B, and vaporizing-chamber A; so that by means of the heater and gas-burner, and the pipes connecting them with the water-vessel B and the chamber A, the whole or a part of the mixture of

air and benzole vapor produced by the apparatus, may not only be used in any convenient place, for the purpose of illumination, but also for heating the water of the vessel B.

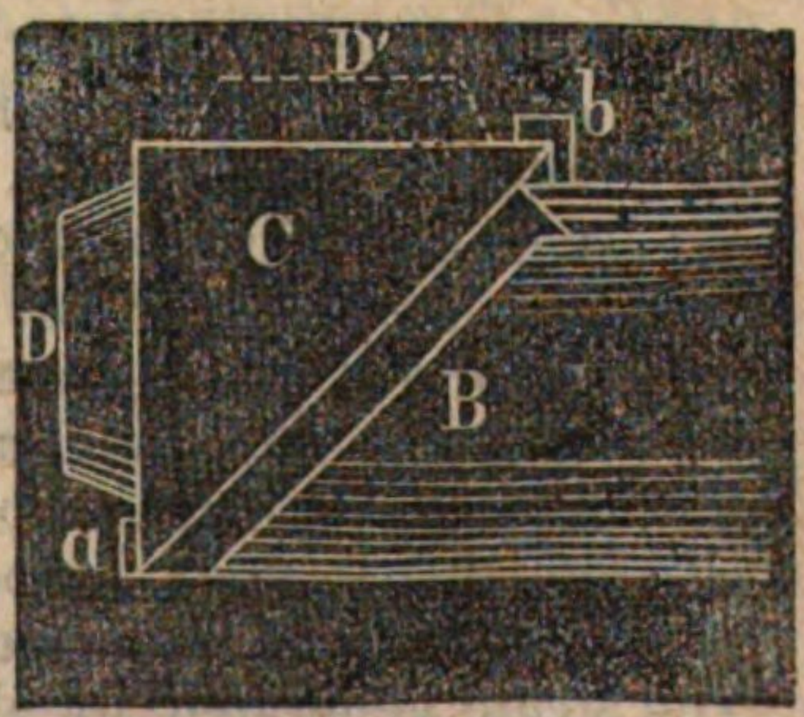


Also, the combination of the closed vaporizing-chamber A, the rotary vaporizer or disseminator I (placed therein), and the rotary meter-wheel Q, and its closed case S, or an air-forcing apparatus, as made to force a stream of air into the hollow shaft of the vaporizer, and through or against saturated portions of the disseminator, and into the vaporizing-chamber or regenerator, so as to vaporize the benzole or hydrocarbon, and mix it with air.

Also, in combination with the meter-wheel and its case, and the hot-water vessel B, the coiled induction pipe M, as made to pass through the water in the vessel B, and thereby receive heat therefrom; so as to warm the air as it passes through the pipe, and to supply oxygen to the volatilized vapors, and for the purpose of facilitating the evaporation of the same. Also, in combination with the induction air-pipe M, the chamber N, and its regulator slide and orifice, applied for the purpose of supplying cold air to the warmed air or to the meter-wheel, in order to regulate the temperature of the air passing into the wheel, and forced into the vaporizing-chamber. Also, the peculiar mode of making the rotary disseminator or vaporizer I, viz., of two perforated heads or disks, a hollow perforated shaft, and strands of lamp-wicking, or other absorbent material, stretched from one head to the other.

Also, for the purpose of an air-blast apparatus, the application and use of the meter-wheel, its closed case, and liquid therein; having its wheel operated by a separate power, and applied in conjunction with the water and closed case, and induction and eduction pipes, for the purpose of blowing air.

No. 9,968.—R. R. Finch, Jr., of New York, N. Y.—*Improvement in Stove-pipe Collars.*—Patented August 30th, 1853.



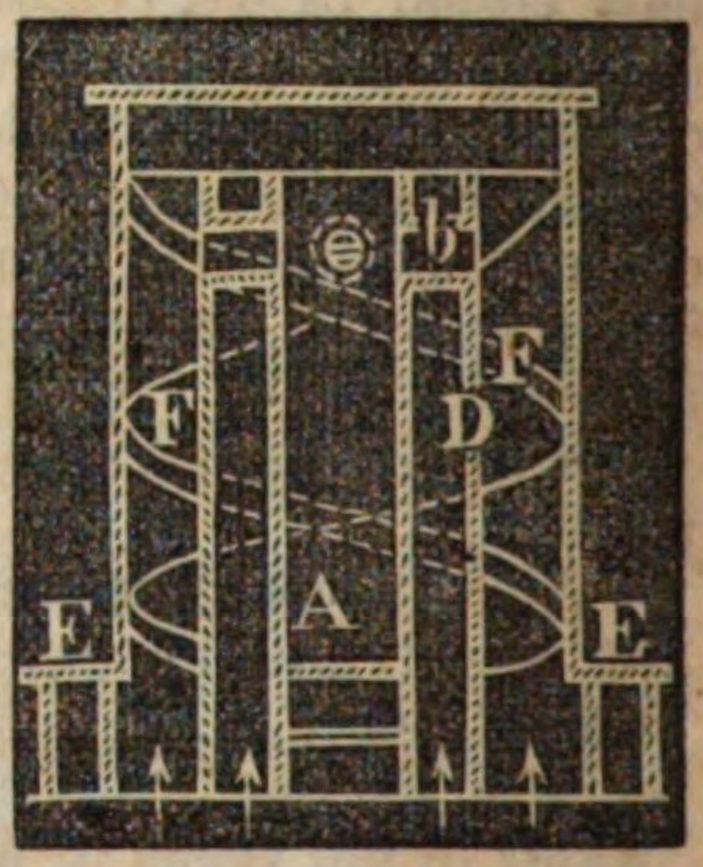
The nature of this invention consists in having a collar C (see figure) attached to the end of the flue B, which projects a short distance from the stove; one side of the collar, as well as the end of the flue, being bevelled at an angle of 45°. By this means, the collar may be so

placed or attached to the end of the flue, that the pipe may project horizontally (see D) from the stove, or perpendicularly (see D′) from it,—the collar being movable or reversible, and fitted to the flue by means of a flanch *b*, and button *a*, on the end of the flue.

Claim.—The reversible collar C, constructed, arranged, and applied to the stove in the manner and for the purpose described.

No. 9,969.—Thomas S. Gore, of Jersey City, N. J.—*Improvement in Stoves.*—Patented August 30th, 1853.

The nature of this invention consists in surrounding an inner cylinder A of the stove, with spiral flues F F, so arranged or connected to the base E, that the heat which passes down the spiral flues will meet or unite with a main flue connected to the ordinary smoke-pipe.



Claim.—The spiral flues F F, surrounding the cylinder D, arranged and connected to the base E, for the purpose of obtaining a large extent of heating surface for flues, and also for forming a space between them, for the admission and heating of cold air.

No. 9,970.—Lansing E. Hopkins, of New York, N. Y.—*Improvement in Conductors in Machines for Forming Hat-Bodies.*—Patented August 30th, 1853.

The nature of this invention consists in a bifurcated conductor, so constructed and arranged as to place the exhaust-cone between two jets of fur. (See fig.)

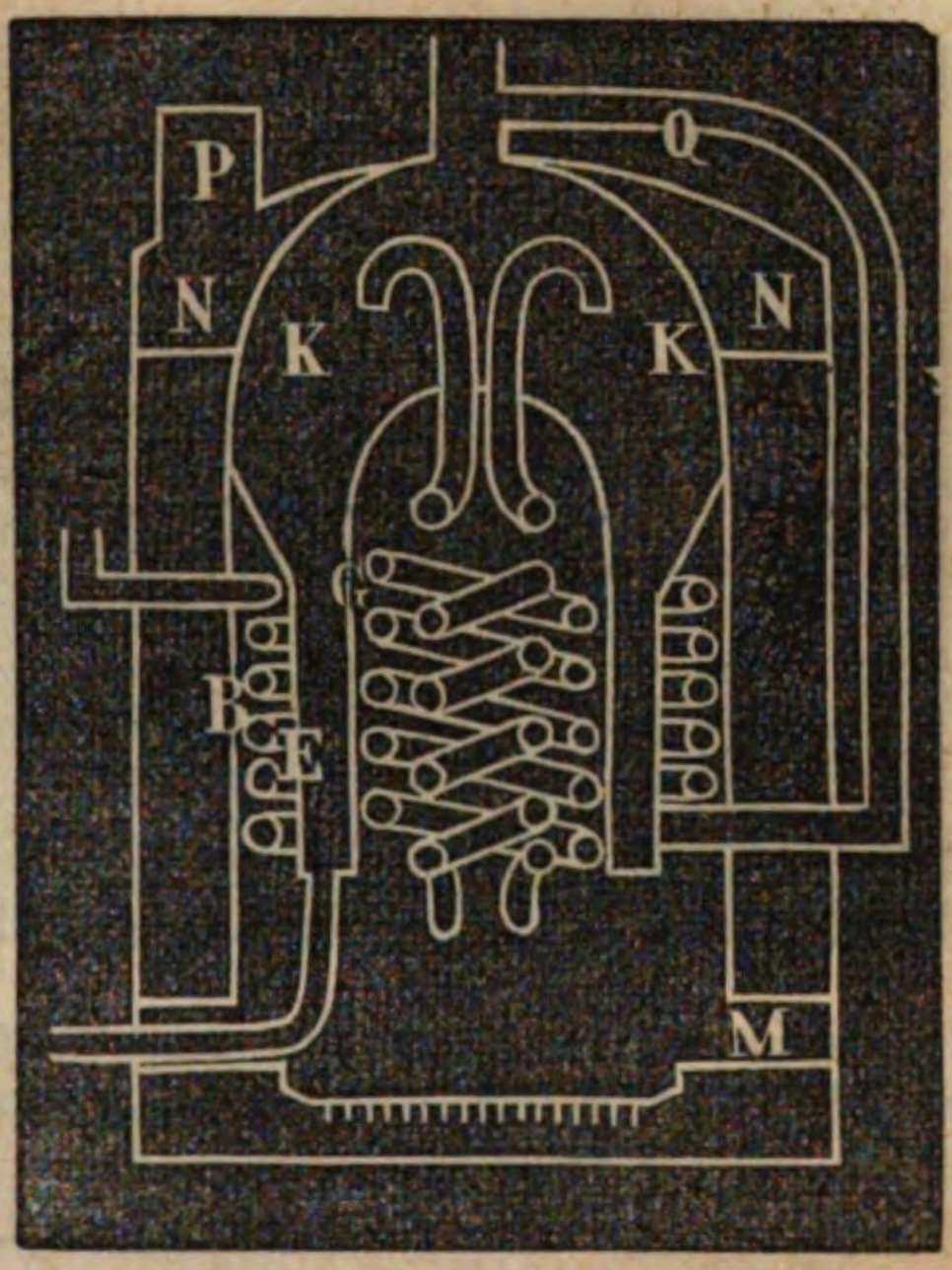
Claim.—The bifurcated conductor and blast, the conductor having its openings opposite to each other, or nearly so, and the cone between them.

No. 9,971.—Benjamin Irving, Green Point, N. Y.—*Improvement in Steam-Boilers.*—Patented August 30th, 1853,

The objects of this invention are to secure a more perfect combustion of the gases generated by the consumption of fuel, and to present a large extent of heating surface, without subjecting any part of it to a very intense heat, and to guard against explosions of the boiler, to gain more compactness, and strength, and durability, and to reduce the necessary weight of metal and quantity of water. The gases rise into the cylinder G (see fig.), and between the cylinders B and E, where they are consumed and made to heat the coils and other surfaces. The products of combustion descend and pass off into the circular flue M, from whence they escape through vertical tubes into the circular flue N, which is in immediate communication with the chimney P. The steam generated by all these heating surfaces rises into the dome

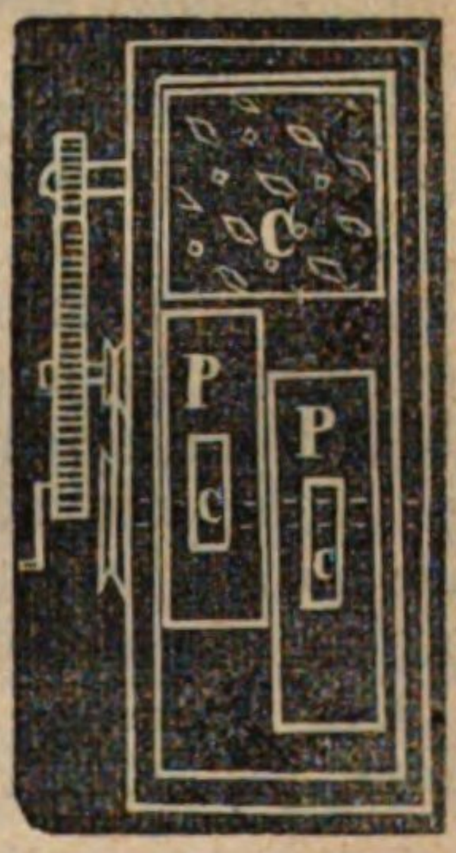
K, from whence it is taken off by the pipe Q, or from any other part of the steam-chamber.

Claim.—A boiler composed of an external "water-jacket" of cylindrical or other form, with a steam-chamber at the top, and with or without one or more inner water-jackets connected with the outer water-jackets, when either water-jacket contains one or more vertical coils of steam-pipe whose lower ends connect with one of the water-jackets, and whose upper ends discharge into the steam-chamber. Also, drying the steam by passing it through a coil within or between the water-jackets.



No. 9,972.—JOHN KRAUSER, of Reading, Pa.—*Improvement in Cider-Mills.*—Patented August 30th, 1835.

C is the cylinder; P P′, pistons. The cylinder is made to revolve rapidly, while the revolving eccentrics which are on the shaft move the pistons in opposite directions, and force the fruit against the grinding cylinder C.

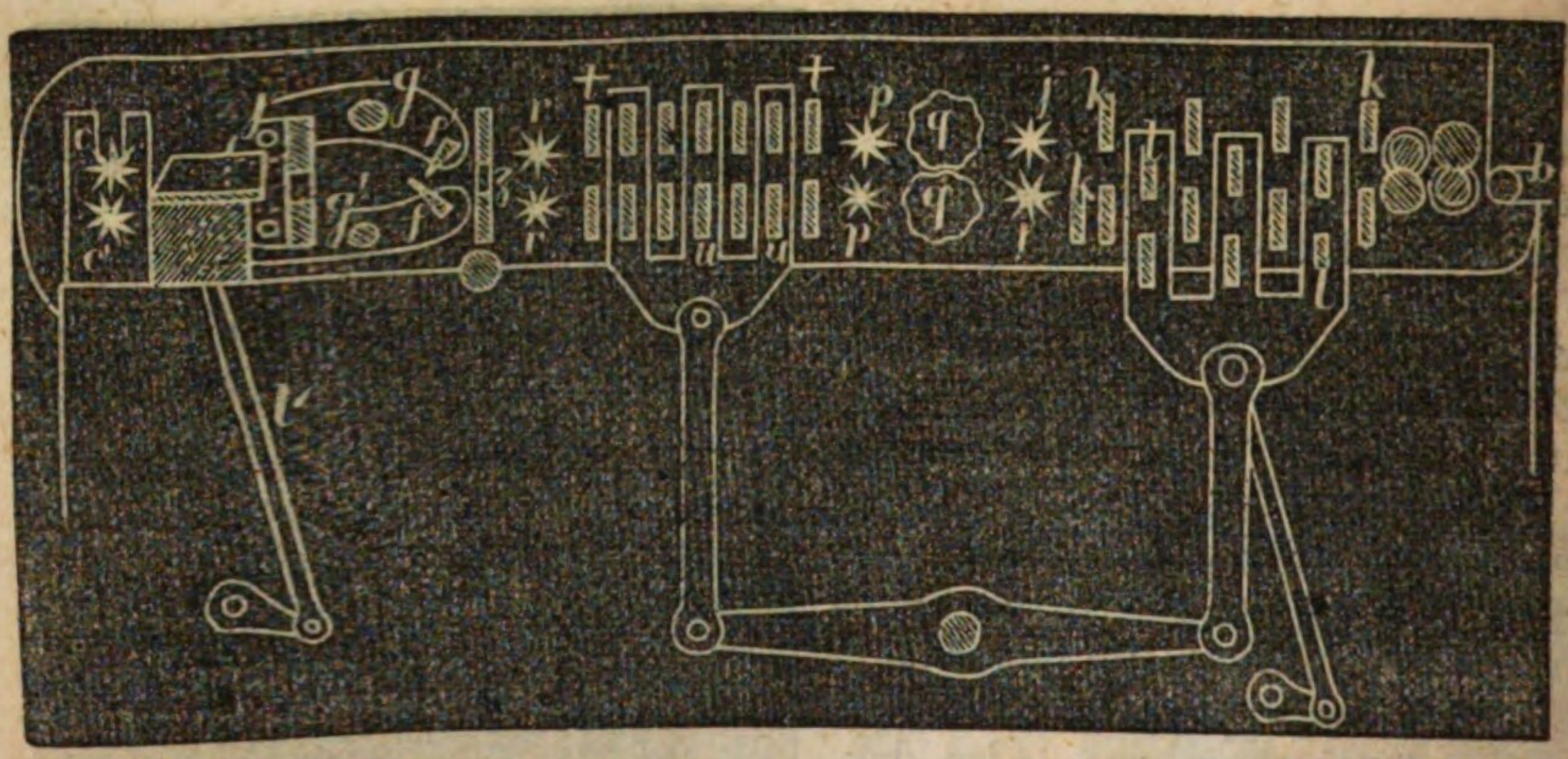


Claim.—Arranging the hopper with reference to the several operating parts of the machine, so that the fruit shall not rest against the roughened exterior of the grinding cylinder, but directly upon so much of the upper surface of the anterior ends of the pistons or plungers as shall be found operating or exposed within its inclosed sides. Also, to cause the incumbent substance to press upon the cumbent or that contained within the cells, so as to oppose the upheaving or ejectment of the same, while in the act of being pressed against the passing teeth of the revolving cylinder c, by the action of the alternating pistons or plungers.

No. 9,973.—O. S. LEAVITT, of Maysville, Ky.—*Improvement in Hemp and Flax Breaking Machines.*—Patented August 30th, 1853.

b is the endless feed apron; *j j*, rollers; *k k*, stationary blades; *l l*, movable blades; *q q*, flying rollers; *p p*, second pair of feed-rollers; *r r*, third pair; *t t*, stationary, and *u u*, movable blades; *z*, slot; *c c′*, delivery-rollers; *f f′*, combs set in arms *g g′*, and worked by rock-shaft *l*.

The hemp or flax is fed to the machine upon an endless apron, which supplies two pairs of grooved rollers; and it then passes between the stationary blades, also blades working vertically; thence the flax passes to fluted and toothed rollers, and finally, when finished, to the delivery-rollers.



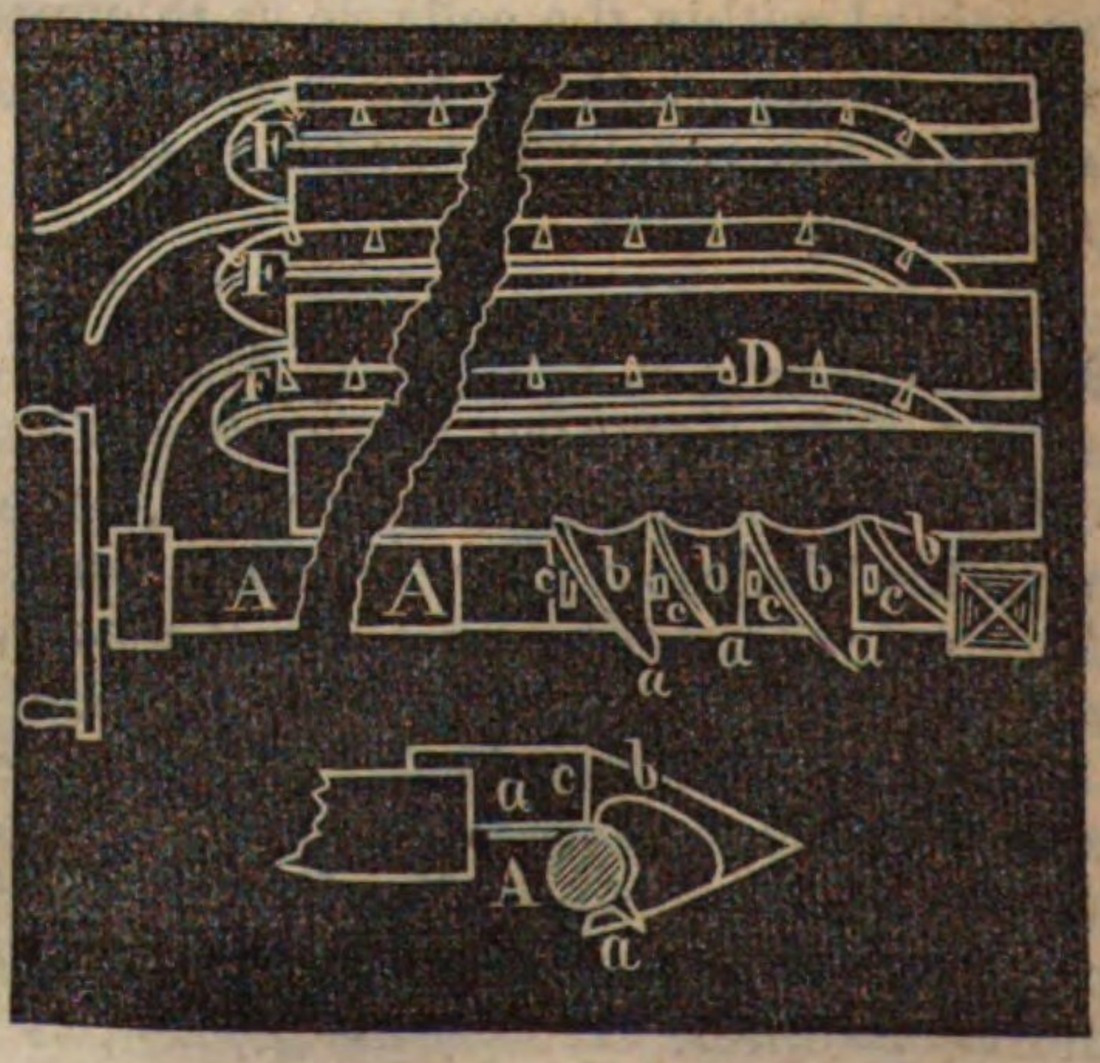
Claim.—The combing apparatus, in connection with the pieces *i i*, which move alternately up and down, to hold the hemp or flax against the combs *f f'*.

No. 9,974.—William H. Mitchel, of Brooklyn, N. Y.—*Improvement in a Machine for Distributing and Composing Types.*—Patented August 30th, 1853.

This machine consists of means for distributing the types from the form, and setting them up in rows within grooves, a given letter in each groove or row, with the faces of the types upwards, and in a line. From these grooves the types are removed, each row of a given letter at a time, and placed within slides or conductors, which supply them to an apparatus connected with finger-keys. The striking of any given finger-key drops one of the types upon one of a series of belts, which are moved by competent pulleys; the belts conduct the types to a composing-wheel and conductor, in the order in which the keys drop them.

Claim.—The several parts of the apparatus, with their combinations, for the purpose set forth.

No. 9,975.—Frederick Nishwitz, of Williamsburgh, N. Y.—*Improvement in Grain-Harvesters.*—Patented Aug. 30th, 1853.



The nature of this invention consists in a peculiar construction and arrangement of cutters and fingers. (See fig.) The cutters *a a* project at right angles, in spiral lines, from the shaft A, and pass between slots *c* in the fingers *b*. The grass or grain passes between the fingers *b*, which have an oblique position. And in the em-

ployment of flanged rollers, for the purpose of throwing the grain from the discharging ends of the belts.

Claim.—The combination of the fingers *b* and cutters *a*, constructed, arranged, and operating as set forth. Also, the employment or use of the flanged pulleys F F F, for the purpose of throwing or detaching the grass or grain from the belts D D D.

No. 9,976.—SAMUEL DARLING, of Bangor, Me.—*Improved Apparatus for Grinding and Shaping Metals.*—Patented August 30th, 1853.

This invention consists in the arrangement of an adjustable table, placed under the grinding stone, for the purpose of facilitating the operation, and making accurate work.

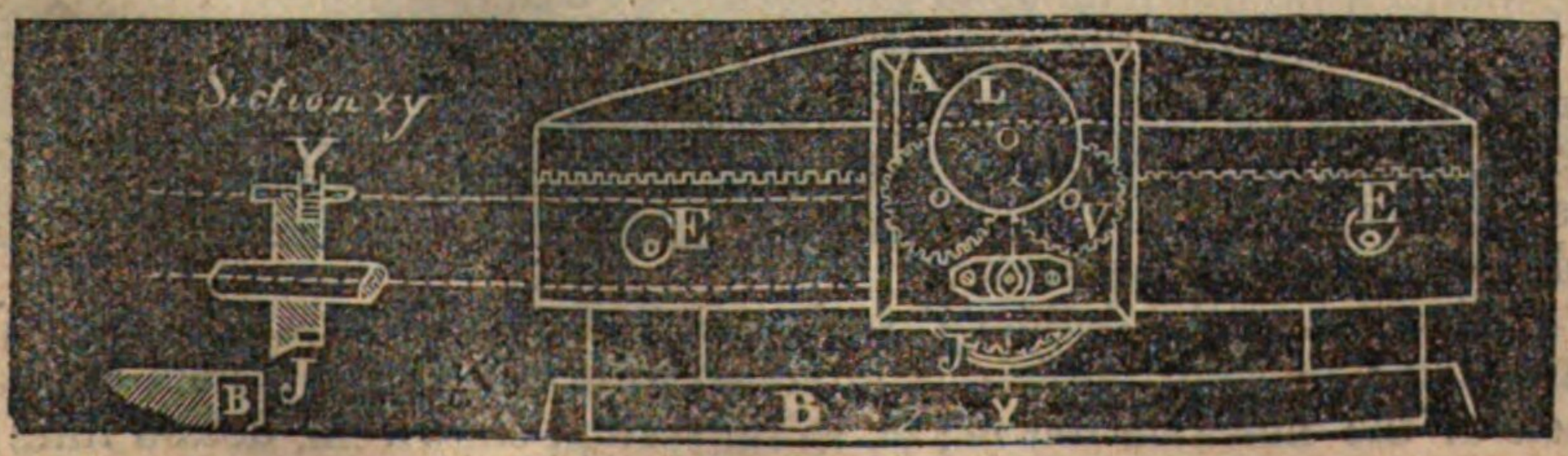
Claim.—The combination of the holder of the article to be ground, with a grindstone or grinding disk, so that the article and stone will change positions relatively to each other, during the operation, in three directions, namely: towards each other, and parallel with, and transverse to the axis of the stone.

No. 9,977.—ANDREW RALSTON, of West Middletown, Pa.—*Improvement in Saw-Mills.*—Patented August 30th, 1853.

The prominent features in this improvement consist in operating the saw horizontally, instead of vertically, and with greater velocity; and in an arrangement and combination of the saw with other parts of the saw-mill, so that the saw will run through and beyond each end of the log, and then be automatically let down a proper distance for the thickness of the stuff to be sawed, and the motion of the carriage reversed; teeth being formed on both edges of the saw.

Claim.—Sawing logs or other timber by means of a reciprocating saw operated in a horizontal position. Also, the arrangement and combination of the saw with the other parts of the saw-mill, so that the saw will run through and beyond each end of the log, and then be let down automatically as set forth, and the carriage reversed, without stopping the machine, and so on until the log is entirely sawed into the required dimensions. Also, connecting the operating pitman with the saw-gate, through the medium of a secondary pitman, connected with the saw-frame and saw-gate, so that the operating force shall be applied in a direction nearly coincident with that of the saw in its successive positions.

No. 9,978.—STEPHEN P. RUGGLES, of Boston, Mass.—*Improvement in Machines for Cutting Sheet-Metal.*—Patented August 30th, 1853.

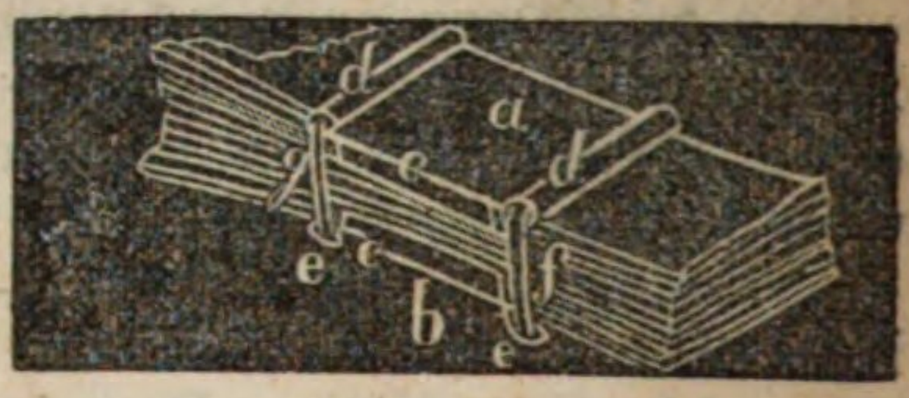


In this machine the cutting blades B and J (J being a rotary blade),

are so hung or arranged that their cutting edges are in the same line, one placed above the other, but not in contact or overlapping; by which means perfectly straight, square, and smooth edges are cut. The cutting-blades may be accurately adjusted for cutting various thicknesses, by means of the eccentric pins or bolts E E. If the pulley C is set in motion, the box A, which carries the rotary blade J, will move along, as is apparent from the figures.

Claim.—The inventor claims substantially the above-described apparatus or machine, for the purpose set forth.

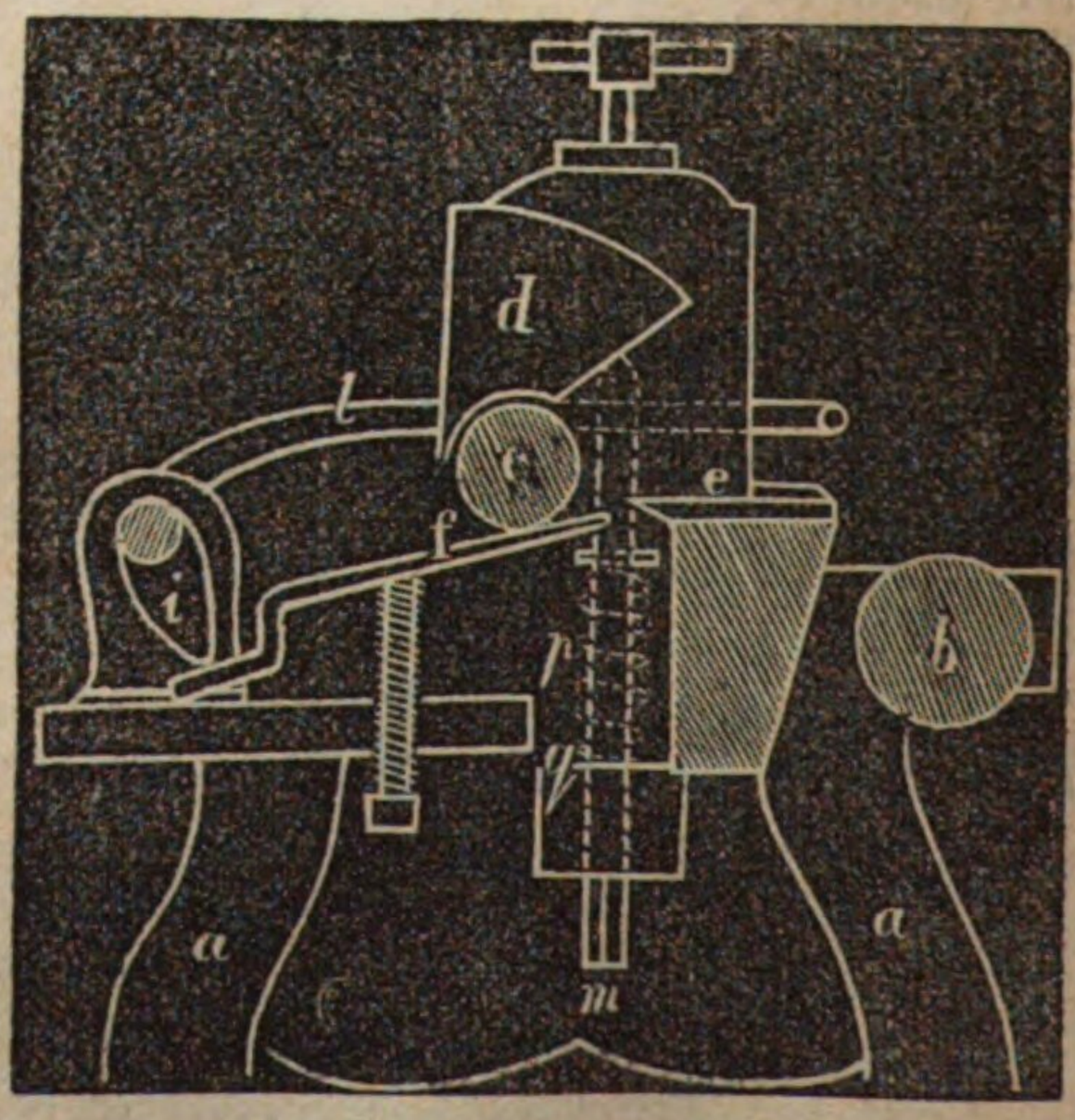
No. 9,979.—DANIEL WINSLOW, of Westbrook, and PERLEY D. CUMMINGS, of Portland, Me.—*Improvement in Paper-Files.*—Patented August 30th, 1853.



By reference to the figure, the claim will explain this improvement.

Claim.—The combination of the plates *a* and *b*, with the elastic bands *f* and *g*, so arranged as that the side edges of the top plate shall be bent down upon the bands, and hold them securely, while the side edges of the bottom plate are turned, but left far enough from the bottom plate for the bands to move freely between them and the plate; the edge lips of both plates being so bent inwards and rounded on the corners as to protect the bands from being chafed or worn.

No. 9,980.—CHARLES WESTON, of Salem, Mass.—*Improvement in Machinery for Splitting Leather.*—Patented August 30th, 1853.



The nature of this invention consists in an arrangement for adjusting and holding the spring-plate, by attaching the arm which operates the cams to a spring-rack, so that the spring-plate will not only be susceptible of adjustment for the different thicknesses of the split, and exert a constant and uniform pressure upon the same, but will also yield to the various inequalities of the hide as it is drawn through the machine. (See fig.) *a a*, frame-work; *b*, roll upon which the leather is wound; *c*, pressure roll, set in the turning-bar *d*; *e*, stationary cutting-knife; *f*, spring-plate turning upon journals; *i*, cam, and *k* its shaft, which is attached to arm *l*, which is held by the rack of the movable rod *m*; *p*, spiral spring, shown in dotted lines; *q*, stationary stud, against which the spiral spring bears.

Claim.—The arrangement above described, for exerting a constant and uniform pressure upon the leather, and at the same time allowing the spring-plate to yield to the inequalities of the hide, the same consisting in a spring-rack for holding the arm which is connected to the spring-plate by the turning-shaft and cams.

No. 9,981.—William Wigston, of New York, N. Y.—*Improvement in Apparatus for Purifying Gas.*—Patented August 30th, 1853.

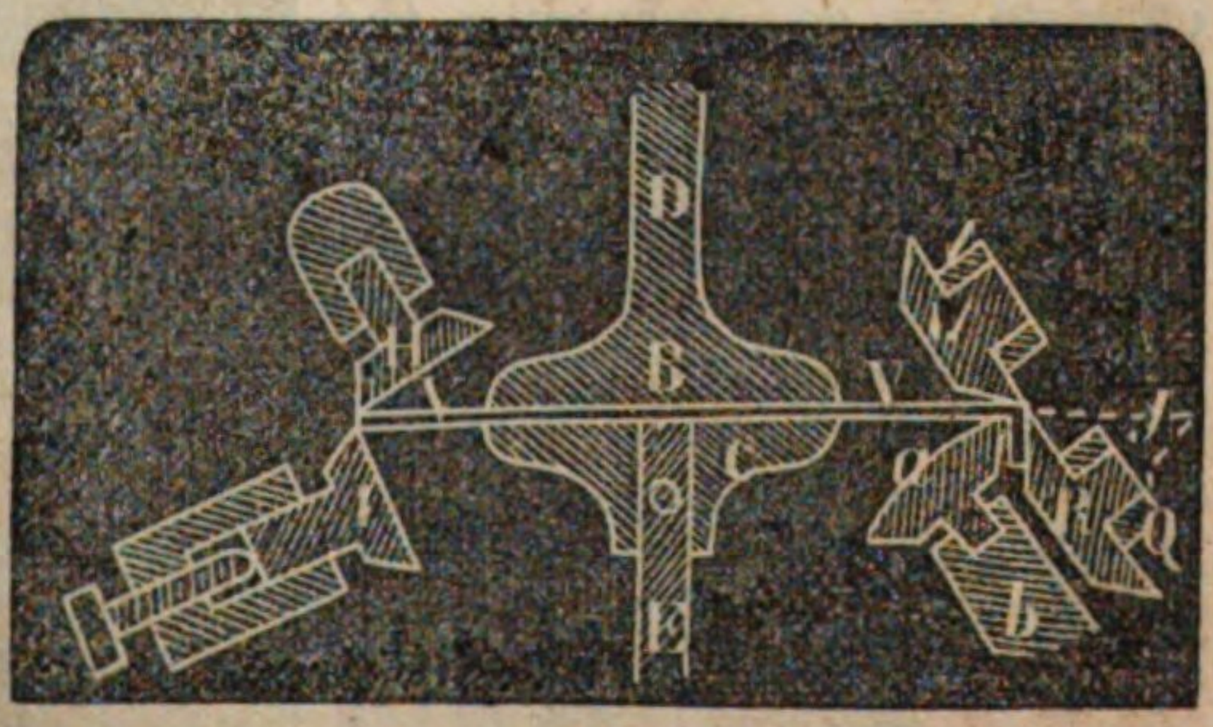
By reference to the figure, the claim will explain the nature and operation of this invention.

A is the lower part of a dry-lime purifier; *x y*, surface of the liquor; B, inlet-pipe; C, outlet-pipe; D, "scrubber" (made of wood); *c*, circular opening in the scrubber; *d d*, annular cavity in the scrubber; *e e* and *f f*, passages.

Claim.—Constructing the scrubber or float D with a cavity *d*, to receive the gas above the surface of the fluid, and partly submerged passages *e e* and *f f*, leading from the cavity through the sides of the float, to allow the escape of the gas from the cavity, and cause its distribution over the surface of the fluid in thin streams, to produce a diffused contact with the fluid.

No. 9,982.—Elliot Savage, of Berlin, Conn.—*Improved Machinery for Cutting and Bending Metallic-Disks.*—Patented August 30th, 2853.

By applying to the two rollers R and *a* the support roller M, the plate is firmly held at or near its outer edge; the bending of it down is effected by the action of the bending-roller R. When the plate is put in revolution, the roller R is moved around against it, and turns down the edge against the conic surface of the roller *a*.



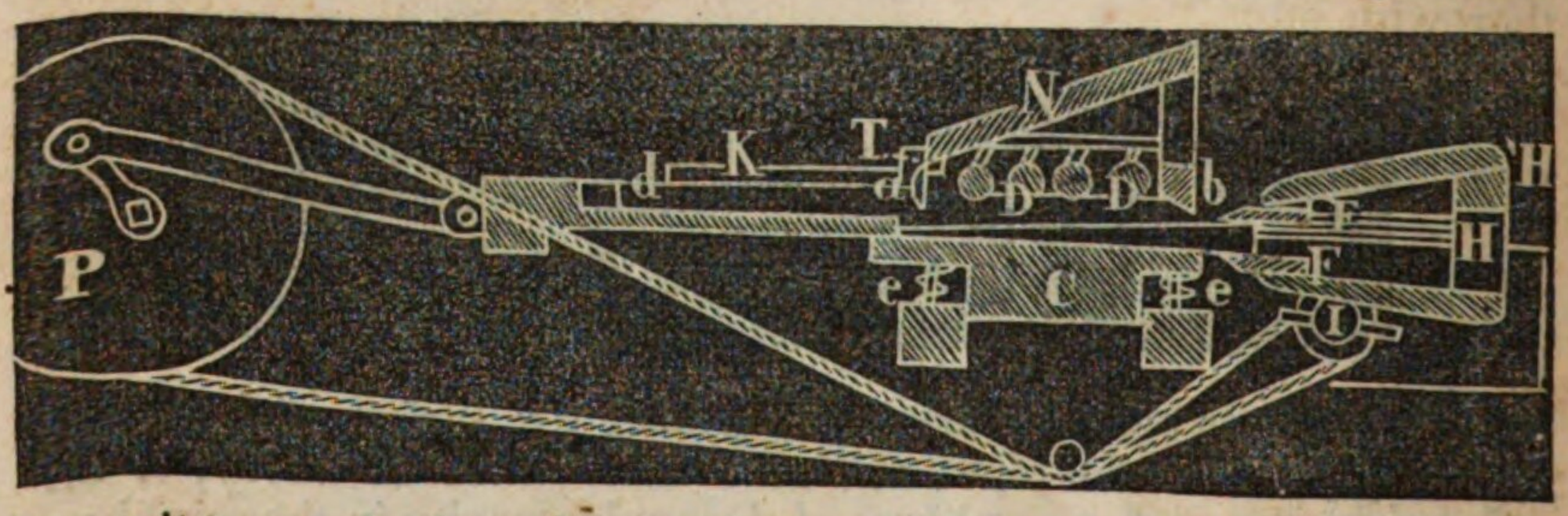
B and C, the circular disks or gripes; E and D, rotary shafts; H and I, cutting-rollers; N, vertical arm supporting the roller M. The bending-roller R can be turned into position *y*.

Claim.—The combination and arrangement of the roller M with the

roller *a*, and the bending-roller R; so as to operate together and independently of the clamps B C, substantially as specified.

No. 9,983.—ELIJAH VALENTINE, of Palmer, Mass.—*Improvement in Shingle Machines.*—Patented August 30th, 1853.

The shingle to be dressed is placed in the recess *d*, and is carried forwards therein past the mouth-piece T, and under the series of rollers D D. When the driver passes backwards, the catches *a* arrest the shingle, and cause it to fall on the platform C; and as the ledges K K pass from under the arbors of the rollers D D, they all in succession fall upon the shingle, and flatten it, in case it should be warped, and

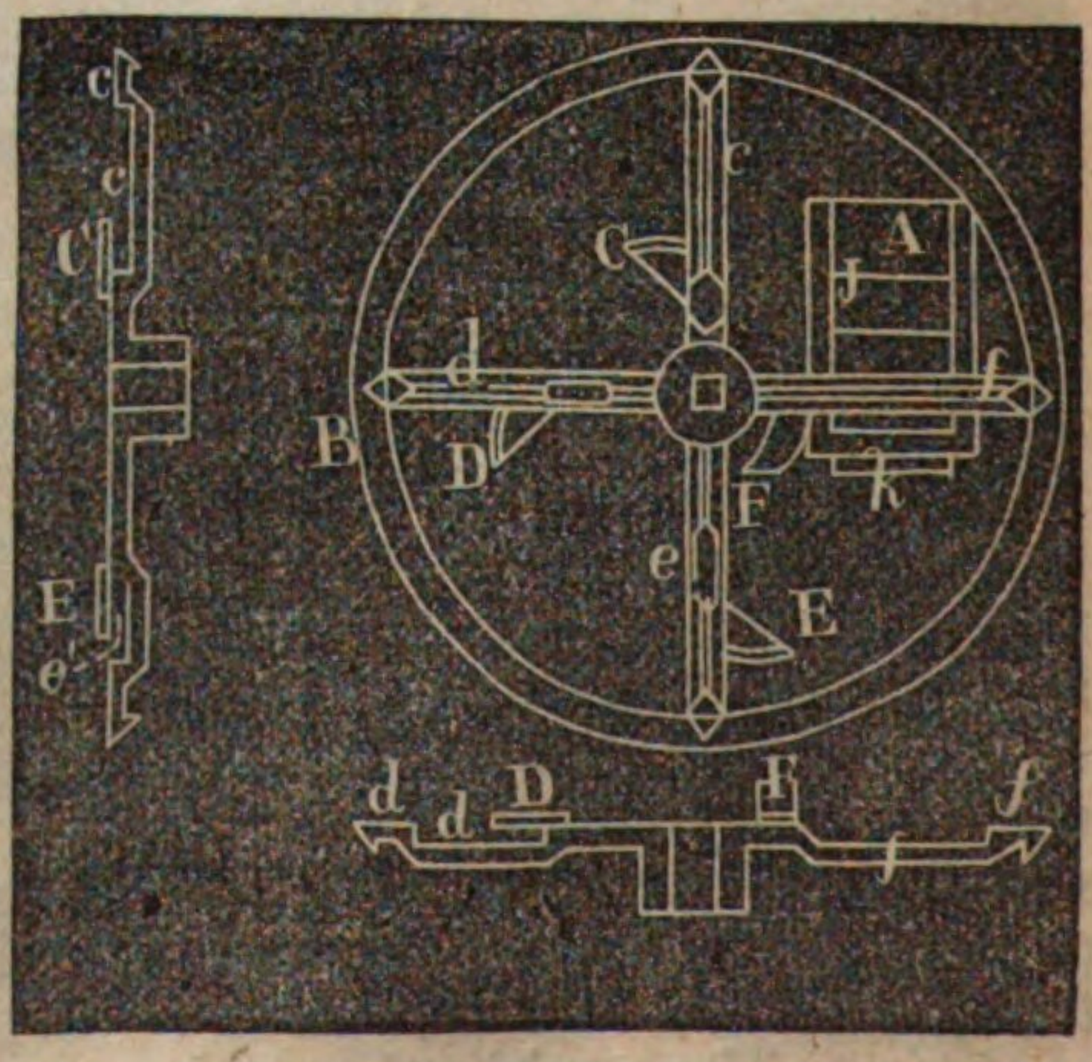


cause it to pass freely under the after mouth-piece *b*, to be operated upon by the knives during the next return movement of the driver. As the next shingle is carried forward, the front end of the driver strikes against the end of the shingle first carried into the machine, and forces under the mouth-piece *b*, in contact with the knives F F; which knives, as they approach each other, impart the proper taper to the shingle.

Claim.—The inventor substantially claims the combination and arrangement of the several parts, for the purpose set forth.

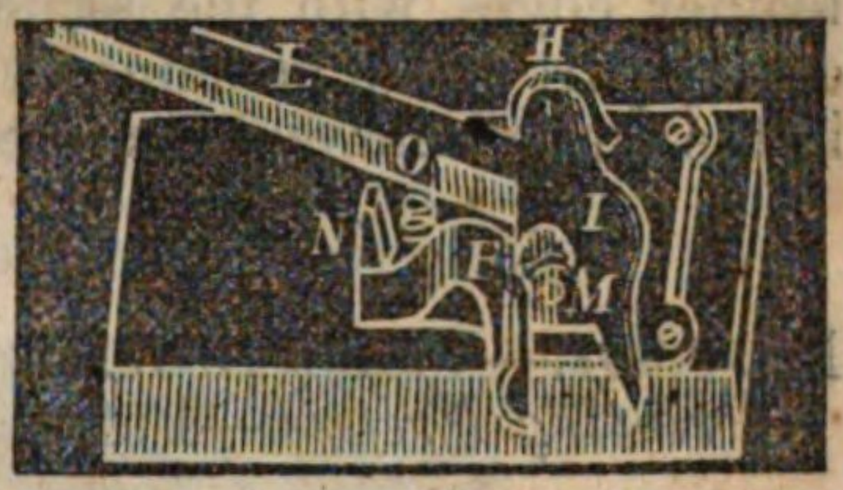
No. 9,984.—JAMES T. ASBURY, of Taylorsville, N. C.—*Improvement in Straw-Cutters.*—Patented September 6th, 1853.

The nature of this invention consists in so arranging the cutting-knives C, D, and E, that one-third of the feed shall be cut by each of the knives, as they successively come in contact with the straw. The knives are fastened to three arms of a vertical wheel. The fourth arm of the wheel is furnished with a cam for moving the feeding apparatus. The arms are constructed with recesses *c d e f*, to permit each to pass over the protruding straw. A is the cutter-box; *k* and *l*, feeding-rollers.



Claim.—The combination of the three cutting-knives, as described, with recessed arms, for the purposes substantially as set forth.

No. 9,985.—PHILOS BLAKE, ELI W. BLAKE, and JOHN A. BLAKE, of New Haven, Conn.—*Improvement in Nut-Crackers.*—Patented September 6th, 1853.



This improvement consists in the arrangement of the jaws in relation to each other, and to the axis on which the movable jaw turns, and in combination therewith stops, to limit the motions of the movable jaw in both directions. F, fixed jaw; I, movable jaw; N, stop; H M, axis on which the movable jaw turns. This axis is parallel to the plane in which the jaws diverge. The spring *o* keeps the jaws open.

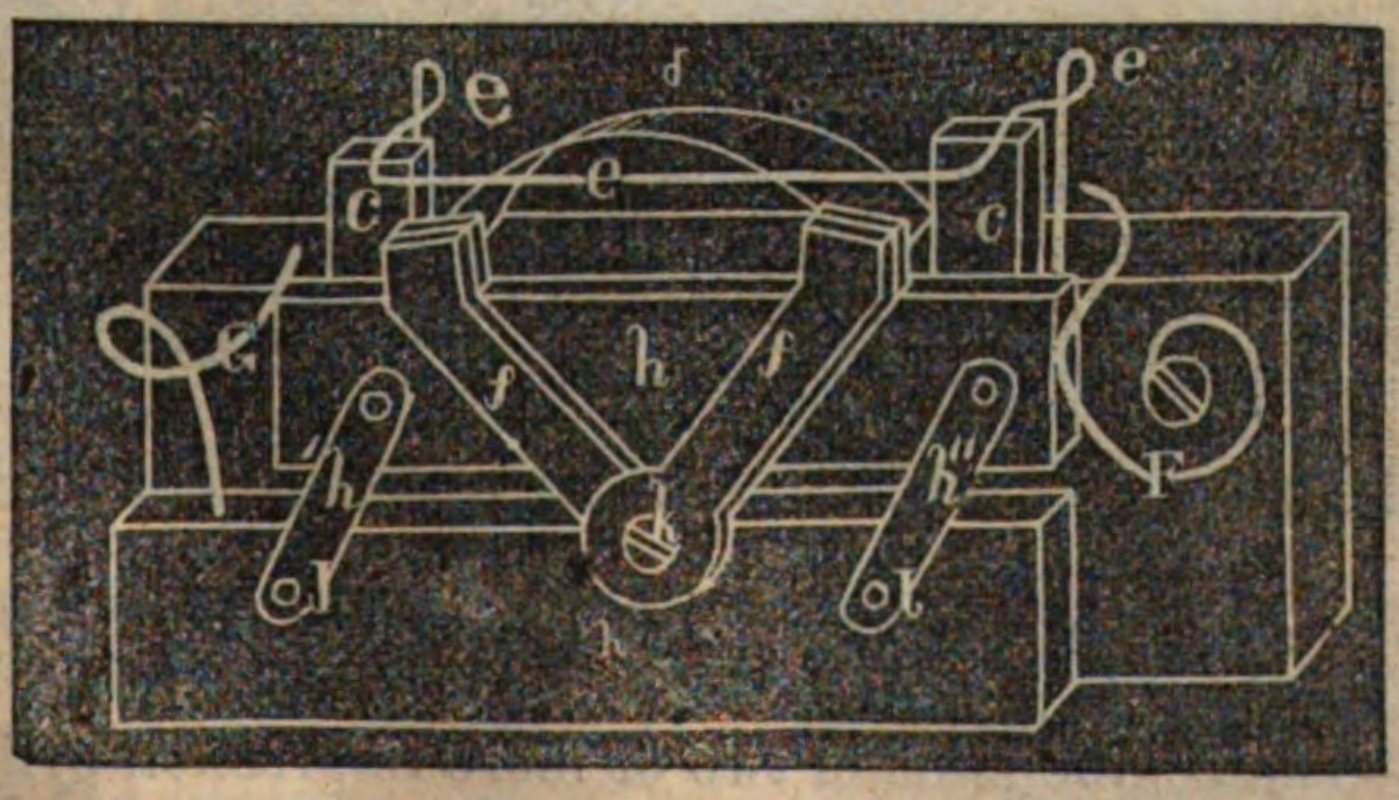
Claim.—The divergence of the jaws in a plane which is parallel to the axis of motion, whereby nuts of different sizes are all received at a uniform distance from the centre of motion.

Also the divergence of the jaws in a plane parallel to the axis of motion, in combination with the two stops, collectively.

Also the divergence of the jaws in a plane parallel to the axis of motion, in combination with their extension beyond the supports of the axis, whereby the line of the axis of motion is brought in close proximity to the acting faces of the jaws, without impairing free access to them, to introduce and remove the nuts.

No. 9,986.—JAMES BARNES, of Franklin, N. Y.—*Improvement in Machines for Edging Leather Straps.*—Patented Sept. 6th, 1853.

d is the circular knife; *e e*, spring to hold the leather tight to the gauge; *h h' h''*, three sides of a parallelogram jointed together, the



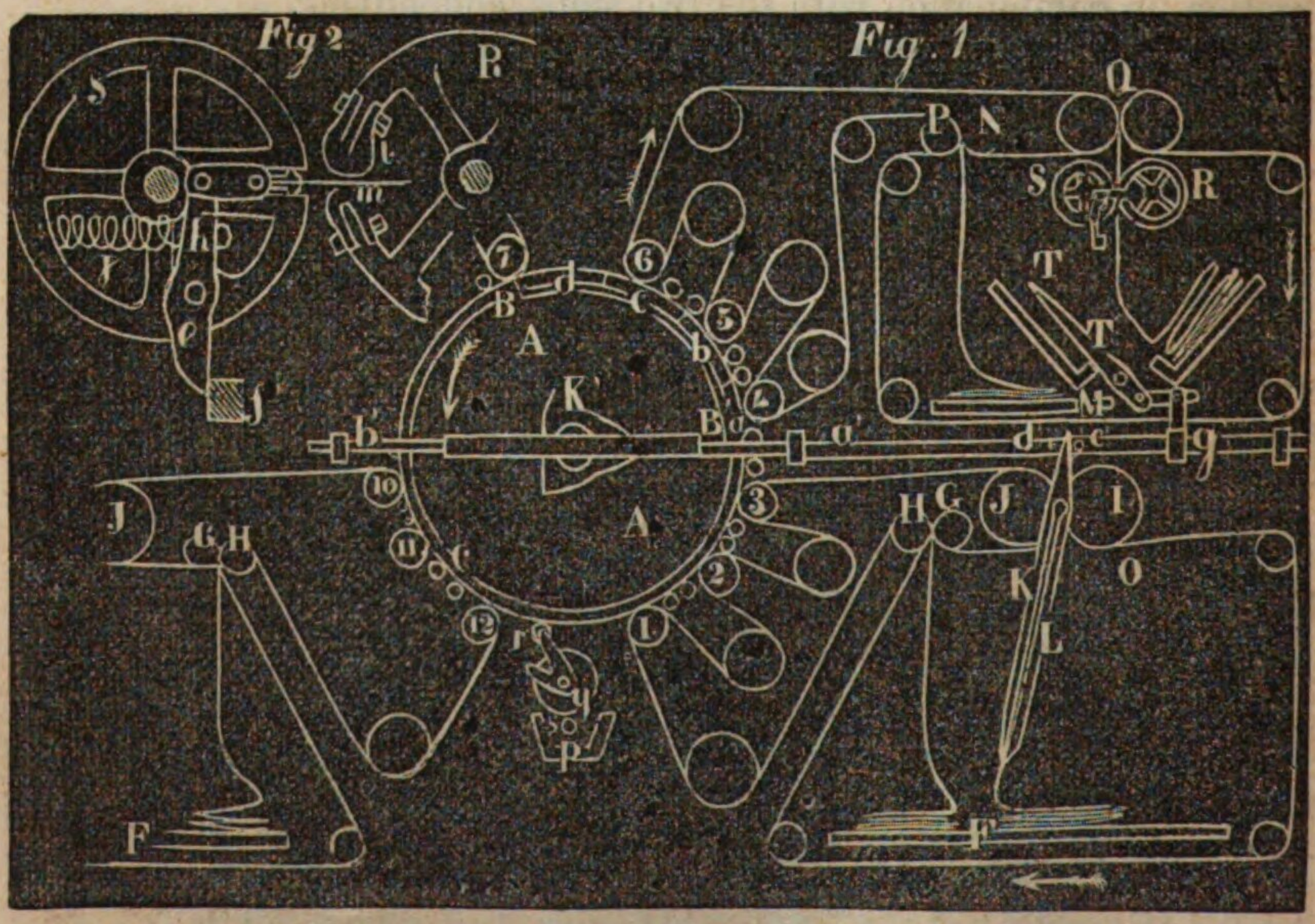
upper part *h* of which is movable round the points J J; *h* touches the front sides of the columns *c c*, and against its ends press the springs F and G; *f f* a pair of dividers inverted with a shoulder on each leg to

rest upon the upper edge of *h*, and hold the leather straight to the arc of the knife; *f f* turn round *k*. Strips of leather of different widths may be drawn through this machine, and their edges rounded; to be used in various parts of harness, &c.

Claim.—The combination of the parallelogram and inverted dividers as a regulating gauge, to work in front of the edge of a curved knife; so that strips of leather of different widths may be rounded to feather edges, with the same perfection, without the change of knife, or any part of the machine; the whole being constructed substantially in the manner herein described.

No. 9,987.—Victor Beaumont, of New York, N. Y.—*Improvement in Printing Presses.*—Patented September 6th, 1853.

This press consists of a printing cylinder A A (see figure), on a part of the surface of which, from B to B′, are fixed the forms of type; the remainder B C B′ of the surface being used as a distributing table. Around this large cylinder are fixed twelve impression cylinders, numbered 1 2 3 4, &c., and between them are elastic inking-rollers. Under the printing cylinder is the ink fountain *p*, the rollers *q* and *r*, to



distribute ink on the distributing table, and the shaft *s*, by means of which the machine is made to revolve.

Claim.—The combination of two or more impression cylinders, with a type cylinder, so arranged as to print all over on one side a continuous sheet of paper, in the manner described.

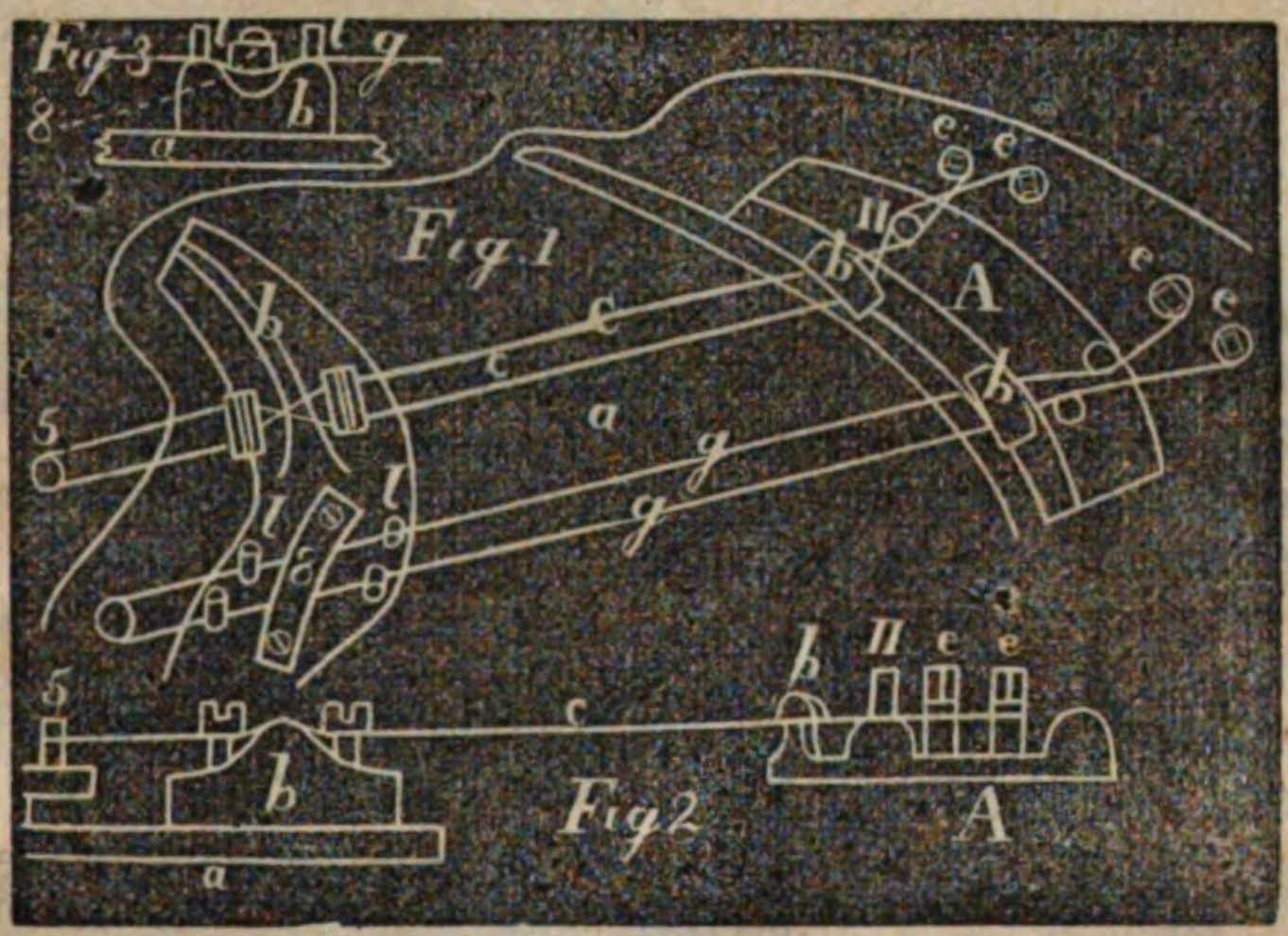
Also the combination of the eccentric K, rod *a′ b′*, and the folder

K L, so arranged as to lay the continuous sheet in piles, after being printed on one side.

Also the combination of the indented knife with the roller R and S, so arranged as to cut the sheet into proper lengths, as printed.

No. 9,988.—WILLIAM COMPTON, of New York, N. Y.—*Improvement in Pianofortes.*—Patented September 6th, 1863.

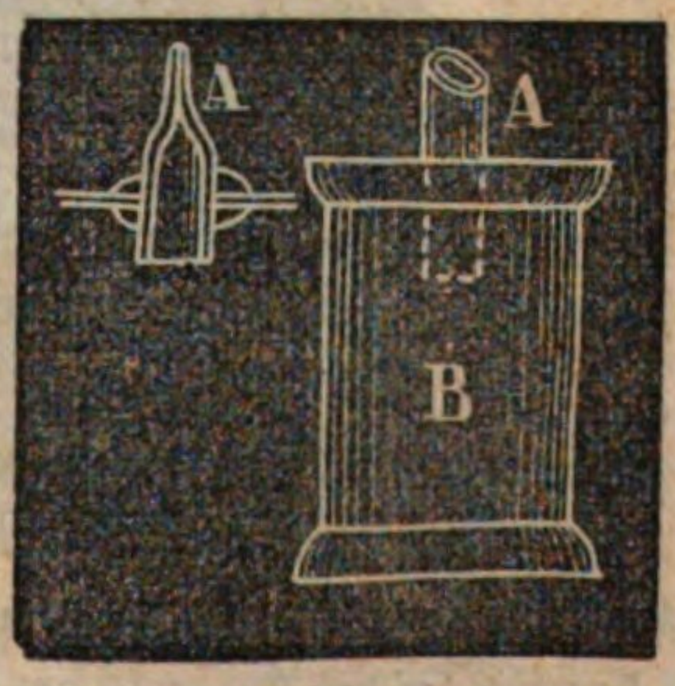
a, sounding-board; A, rest-plank; *c c*, *g g*, strings; *b*, T; I I, pin. Fig. 1 is a top view of the apparatus. Fig. 2 is a side view of the strings *c c*, &c. Fig. 3 is a side view of the strings *g g*, &c.



Claim.—The means for securing the strings into the angles of the T's, by the combined operation of the upbearing bridge or rest, to which the T's are connected; and crossing and drawing the strings together at said bridge or rest, for the purpose of relieving the sounding-board or rest-plank of vertical pressure.

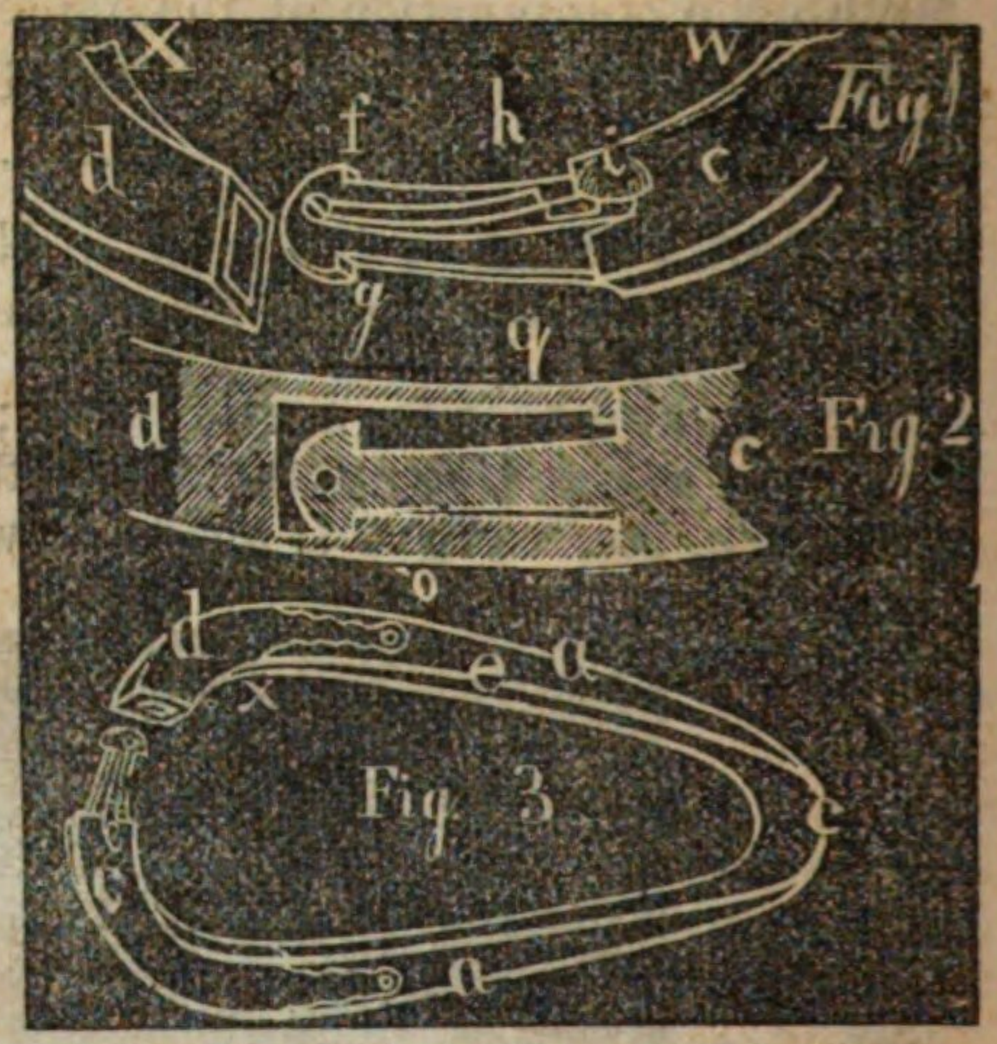
No. 9,989.—HENRY HUNT, of Brooklyn, N. Y.—*Improvement in the Mode of Preserving Fruit, &c.*—Patented September 6th, 1853.

The nature of this invention consists in excluding air from articles put up in canisters or other vessels, by providing the vessel with a small tube, and connecting the tube with the receiver of an air-pump; and, after exhausting the air, pressing or mashing the tube together, to make an air-tight joint until separated from the air-pump, and then soldering. A is the tube; and B, the canister.



Claim.—The above description embraces the inventor's claim.

No. 9,990.—Joseph R. Lindner, of New York, N. Y.—*Improvement in Horse-Collars.*—Patented September 6th, 1853.



This invention consists in forming the hame-plate so that it shall add security to the collar by its springs, and also combining with the spring hame-plate a lock with triple fastenings. Fig. 3 represents the flat piece of wrought-iron *e* in the shape of a collar; *a a* is the padded portion of the collar, secured to the hame-plate; *c d* are the lock-pieces. Fig. 1 represents them as open; and fig. 2, as closed.

Claim.—The union of the hame-plate and collar, in combination with the lock-plates. Also the triple fastening of the lock-plates, in combination with the outward and backward spring of the hame-plates.

No. 9,991.—John Moyle, of Martinsburg, Va.—*Improvement in Straw-Cutters.*—Patented September 6th, 1853.

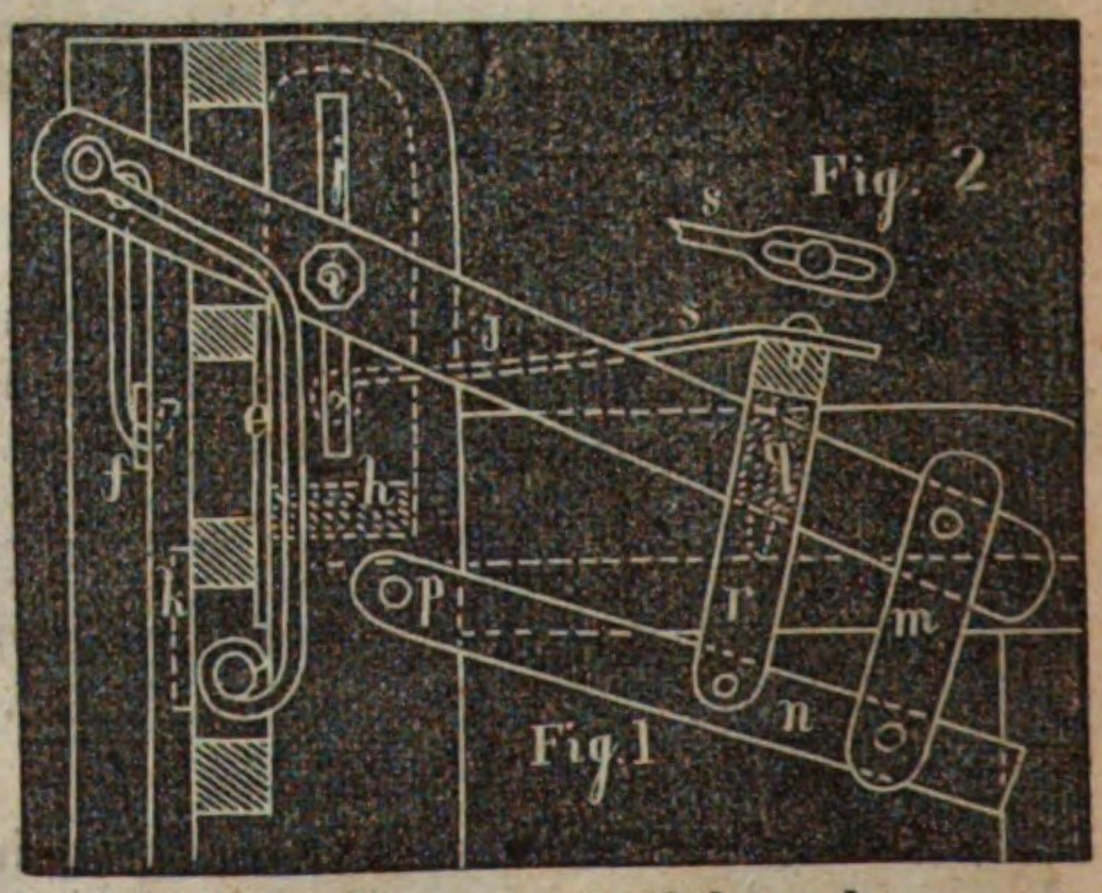
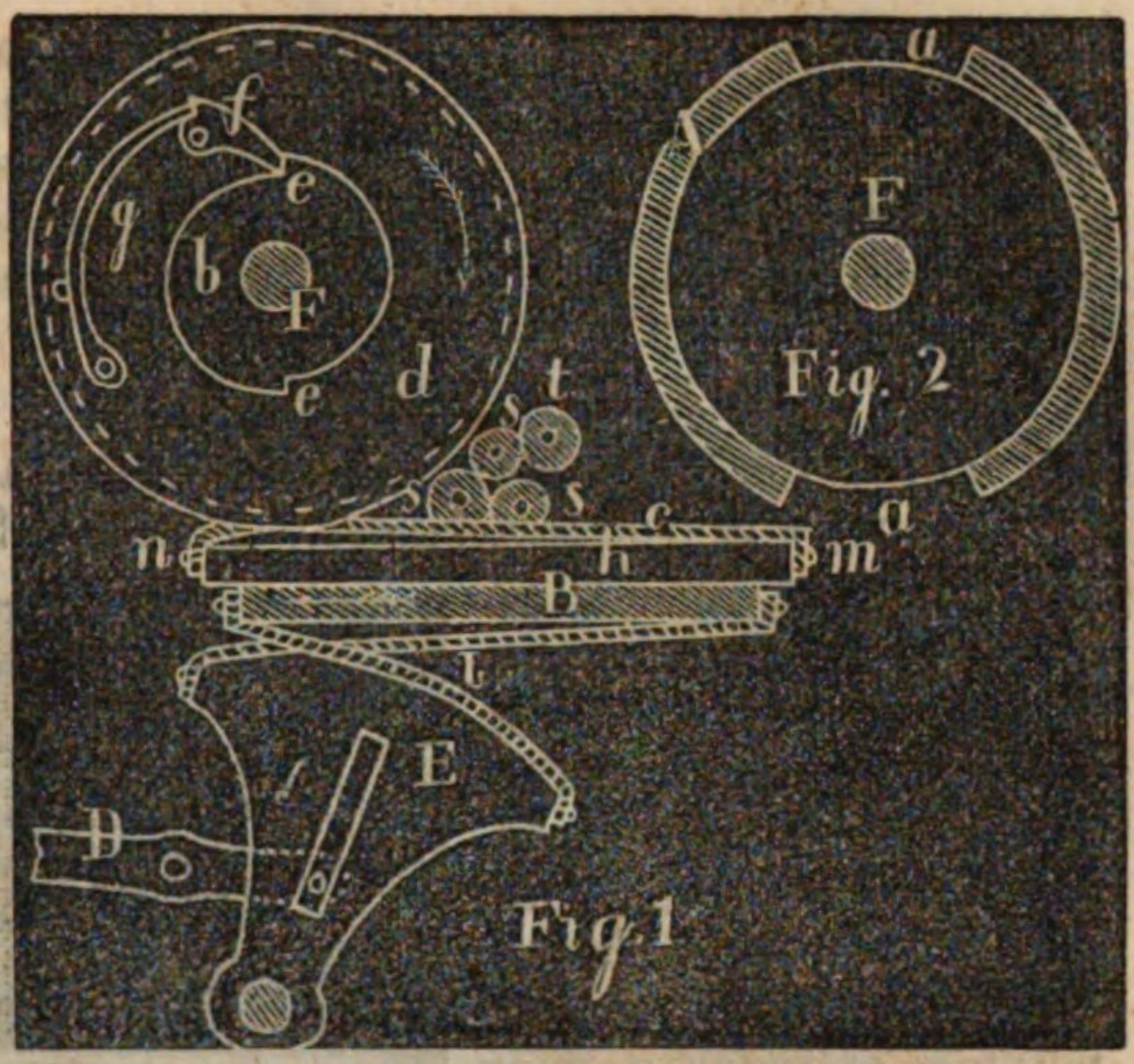


Fig. 1 is a section of the apparatus. Fig. 2, a top view of the spring *s*. From lever *f* the motion is transmitted to two levers J, and consequently to the holder *h*; the bar *i* moving in the slot *j* to accommodate this motion. *e*, knife; *k*, plate, limiting the protrusion of the straw; *m*, rods connecting the levers J and *n*; *p*, fulcrum of lever *n*. The connecting-rods *m* are drawn forward by the motion of *l*, and, striking the arms *r* of the rake *q*, pass forward the rake so as to move the straw.

Claim.—The combination of the rake *q* and holder *h*, for feeding the straw to be cut, and binding it to the box.

No. 9,992.—Charles Montague, of Pittsfield, Mass.—*Improvement in Printing Presses.*—Patented September 6th, 1853.

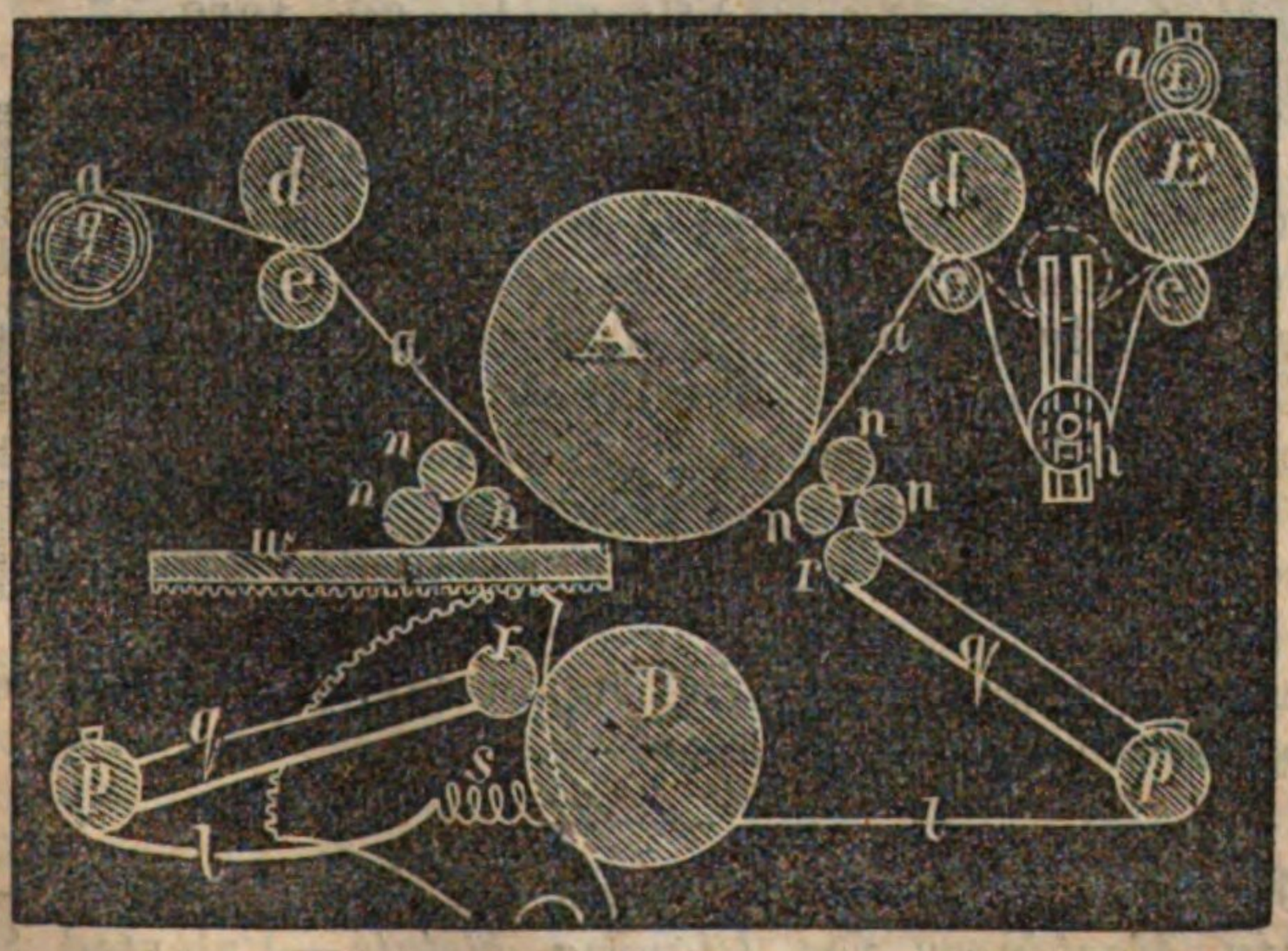
B, fig. 1, horizontal bed, to which a vibratory motion is imparted by the vibrating lever D, disk E, and cord J; *t*, reciprocating ink-distributing roller; *s s s*, ink-rollers. A, fig. 2, pressure-cylinder, divi-



ded into two or more sections respectively, of suitable width to press upon the entire form, and separated by narrow openings *a a*. Upon one end of the shaft F of cylinder A is attached a wheel (see fig. 1) *d*, the periphery of which is provided with notches *e e*, each of them opposite to the respective openings *a a*. On the side of this wheel *d* is placed a pulley, which plays freely on axis F, and carries with it a spring *g*, and a click *f*. Round said pulley passes a cord *c*, the ends of which are attached to the ends *m* and *n* of a projecting bar *h*, on bed B.

Claim.—Such a combination and arrangement of cylinder A and bed B, that whilst one sheet is receiving its impression, the sheet to receive the next impression will be carried forward upon the cylinder nearly to the bed, for the purpose of being in readiness to commence receiving its impression the moment after the bed starts upon its next forward movement.

No. 9,993.—CHARLES MONTAGUE, of Pittsfield, Mass.—*Improvement in Printing Presses.*—Patented September 6th, 1853.



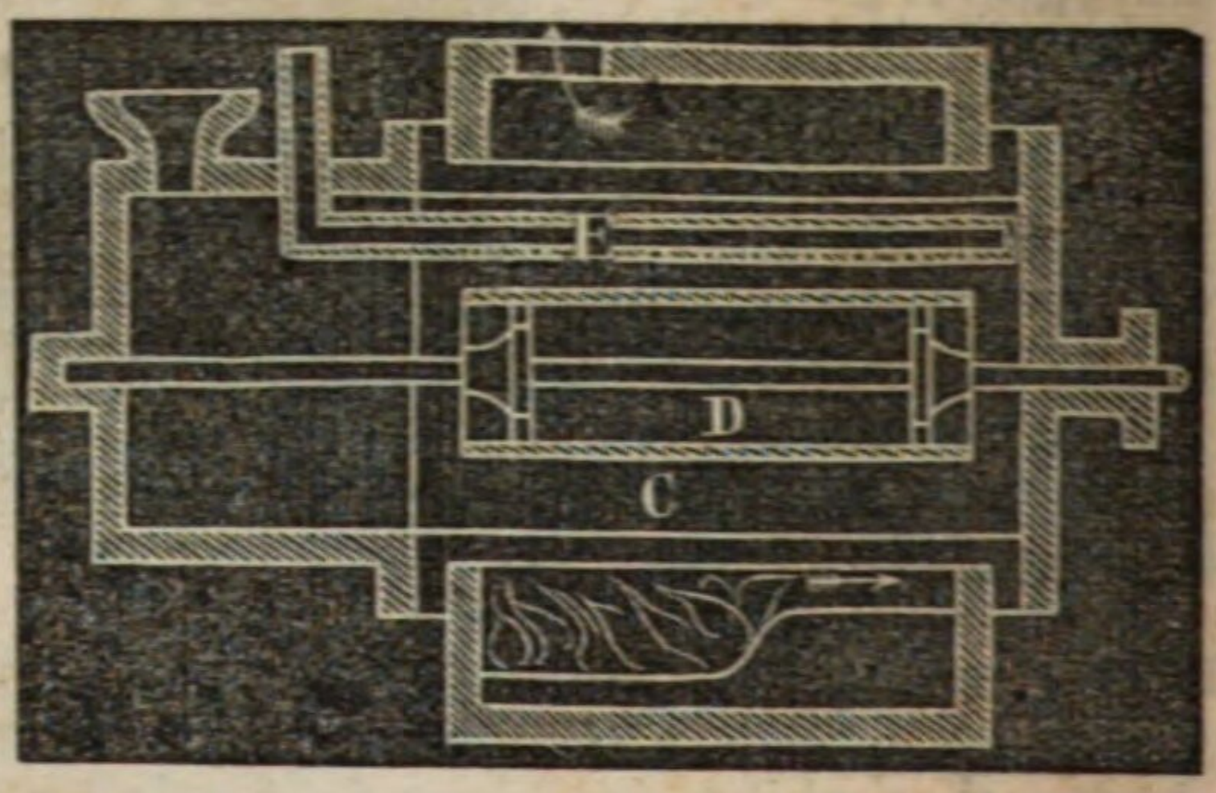
By reference to the figure, the claim will explain this improvement.

Claim.—The combination of the intermittingly winding cylinder E and feed-roller *h*, or their equivalents, with the reciprocating pressure

cylinder A, bed B, and rollers *d d* and *e e e*, arranged and operating in such a manner as to successively make an impression on the continuous sheet at each movement of the bed. Also, in combination with a double set of inking-rollers, the arrangement of the arms *q q* for inking both sets of rollers from a fountain placed vertically below the impression cylinder.

No. 9,994.—STEPHEN MEREDITH, of Erie, Pa.—*Improvement in Feed Apparatus to Gas-Generators.*—Patented September 6th, 1853.

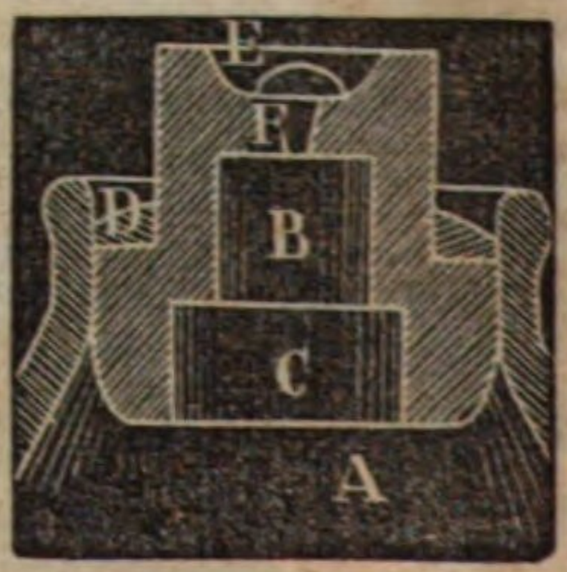
The nature of this invention consists in the construction of a peculiar retort, by which a heated surface is constantly presented to the tar fluid. This is effected by placing within the retort C a revolving cylinder D, upon which the fluid drops from a perforated pipe E. (See figure.)



Claim.—The peculiar construction of the retort as described; viz., having the retort C of cylindrical shape, or of other suitable shape, and placing within it a revolving cylinder D, which, as it rotates, constantly presents a heated surface to the fluid, and converts it into gas, preventing the fluid from cooling the retort, and also preventing the formation of any incrustation on the same.

No. 9,995.—JAMES SPRATT, of Cincinnati, Ohio.—*Improvement in Bottle Fastenings.*—Patented September 6th, 1853.

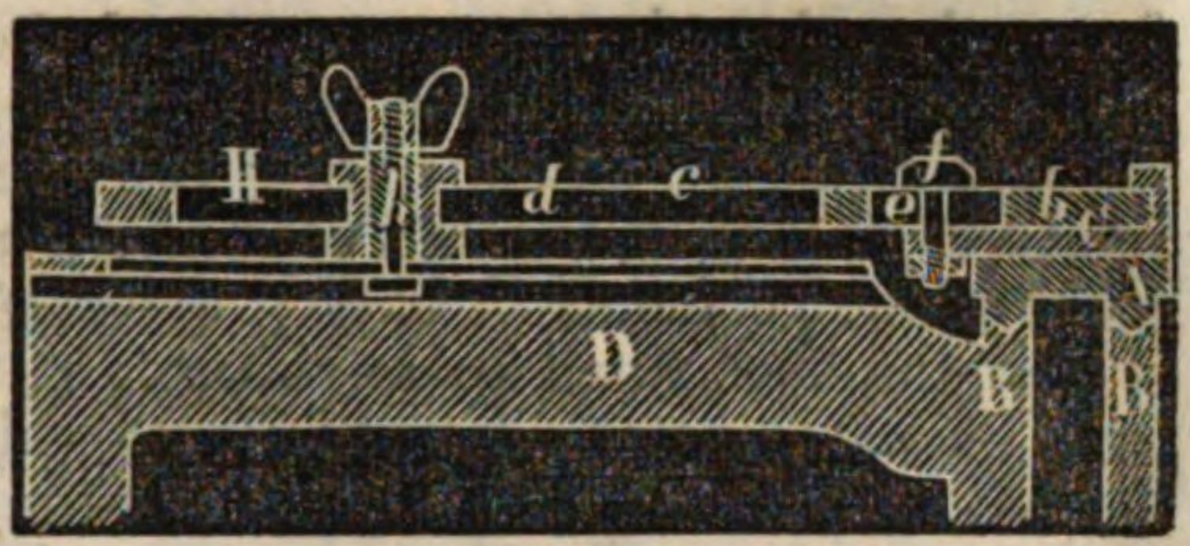
A is the bottle; B, ground stopple; D, cement. After expelling the air by placing the bottle in hot water or sand, a few drops of wax, gum, or the like, are melted into the orifice F, until it is filled, and slightly overflows the bottom of the cup E. The bottle is filled before the stopple B is placed in its mouth, and cemented; and the small aperture F, where the air and steam escape, is all that is necessary to seal by means of the melted gum.



Claim.—The application of the cup or cavity E, and aperture F, for sealing preserved edible substances.

No. 9,996.—WILLIAM W. SPAFFORD, of Boston, Mass.—*Improvement in Machinery for Planing Metals.*—Patented September 6th, 1853.

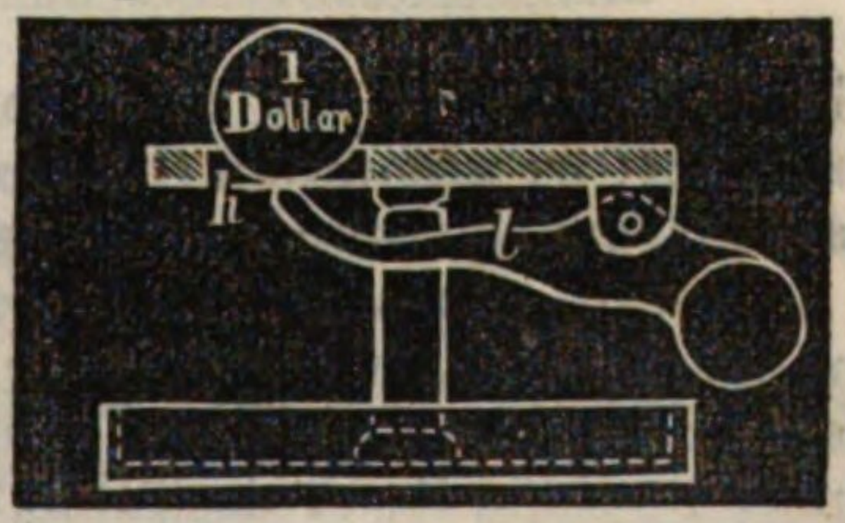
A is the main carriage or bed of a planing machine, sliding on frame B B; from which extends, at right angles, the brace D; through



the top of which is a long dove-tail slot *a*. C, metallic plate, fixed to the top of the planing table, on which rests the plate *b*. This plate *b* terminates in a radiating arm *c* H, which has a long slot *d*. The shorter slot *e* receives a pin *f*. The thumb-nut *n* serves to clamp the centre-pin *h* to any part of the brace; the screw-pin *f* is adjustable in its slot: thus the distance of the common centre of the two screw-pins from the plate *b* of the radial arm may be regulated at pleasure, so as to cause the centre, or any other point in such plate, when A is put in movement, to describe a circular arc of any required radius within certain limits. A piece of metal placed on the top surface of plate *b*, may be planed in curved lines.

Claim—The combination of the receiving table, or plate *b*, and its arm *c* (composing the radial arm H), the adjustable centre-pins, or their equivalents, and the brace D, together with the main planing table A, and its supporting frame B; the same being made to operate substantially as specified, and for the purpose of adapting the planing machine to planing in curved lines.

No. 9,997.—GIDEON B. SMITH, of Baltimore, Md.—*Improvement in Counterfeit Coin Detectors.*—Patented September 6th, 1853.



This invention consists in a hole or slot *h* (see figure), just large enough to let the genuine coin pass through upon the end of lever *l*. If the coin is genuine, it will pass snugly through the slot *h*, and its weight will depress the end of the lever, and it will fall through; but if counterfeit, it will either be too large to pass through the slot, or be too light to depress the lever, which is so balanced as to require the exact weight of the genuine coin to depress it.

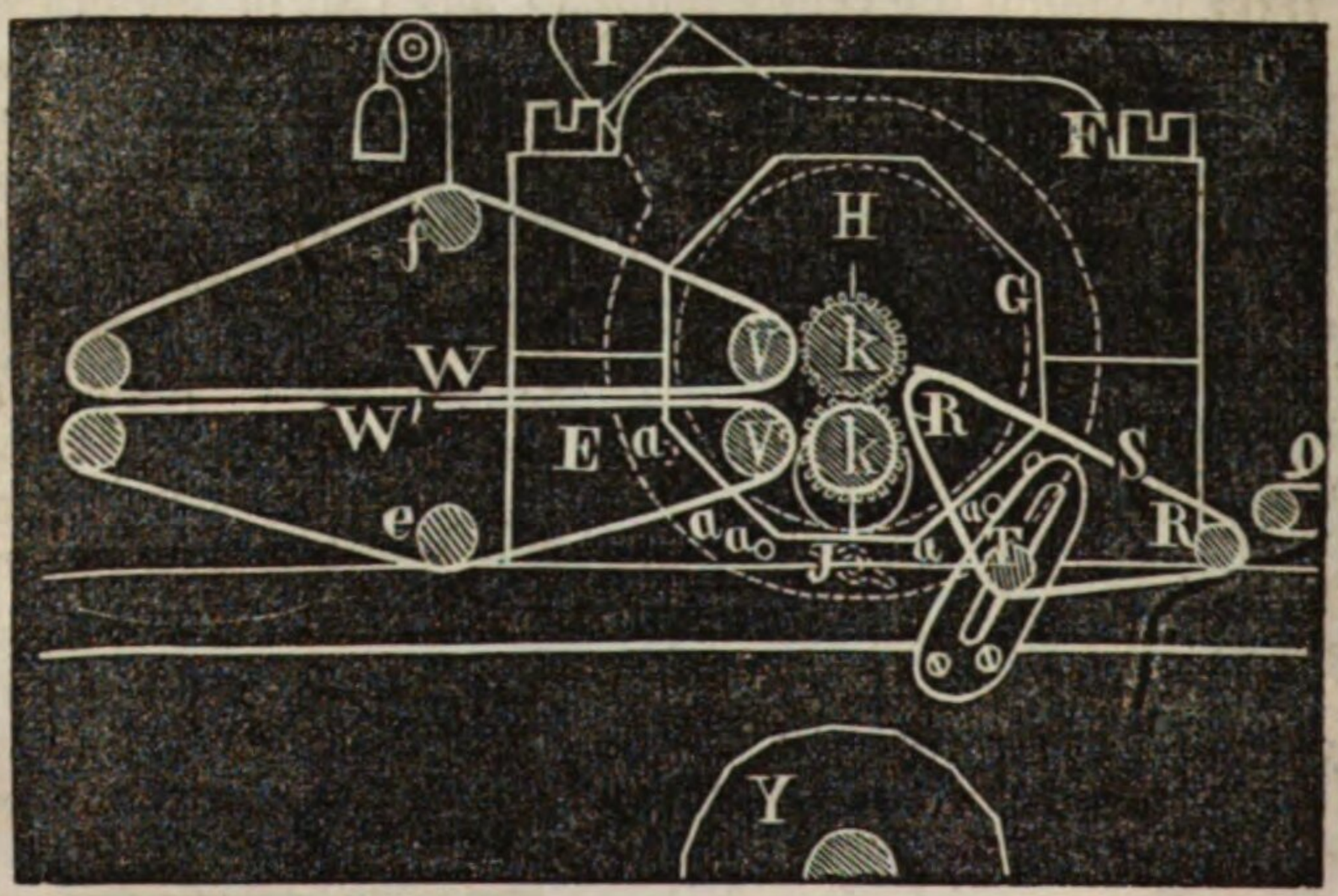
Claim.—The above description fully sets forth the inventor's claim.

No. 9,998.—HENRY L. WEEKS, of Hannahatchie, Ga.—*Improvement in Cotton-Gins.*—Patented September 6th, 1853.

The nature of this invention consists in arranging and securing the boxes in which the ginning rollers operate, in a revolving or adjustable frame or box; so as to adjust or fasten the box at such an angle as it may be necessary or desirable; so as to operate upon the cotton to the best advantage, whether it is dry or moist; so as to allow the seed, after the cotton is removed, to drop from the rollers, and thereby adapt the rollers to cotton with large or small seed, whether picked early or late. Also in the use of one or more fluted metal rollers, in conjunction with one or more covered with raw hide, leather, india-rubber, or gutta-percha. Also in the use of two feeding aprons, one moving

faster than the other, so as to spread the cotton, and allow the sand, &c., to pass out between them, through a space left for that purpose. Also, in arranging and operating two aprons, so as to take the cotton from the ginning rollers and condense it into thick sheets, and save the labor of one person.

H is the box, fitted so as to turn; E, the box containing the round hole, indicated by the dotted lines, to which the box H is fitted; I is a wrench made to turn the boxes to set the rollers at the desired angle; J is a pin to fasten the boxes; K K are the ginning rollers; T, roller to



keep the apron tight, when roller R is carried nearer or farther from roller R', by alterations in box H; S and Q are aprons; W W' are also aprons, surrounding the rollers V V'; *f* and *e* are tightening rollers.

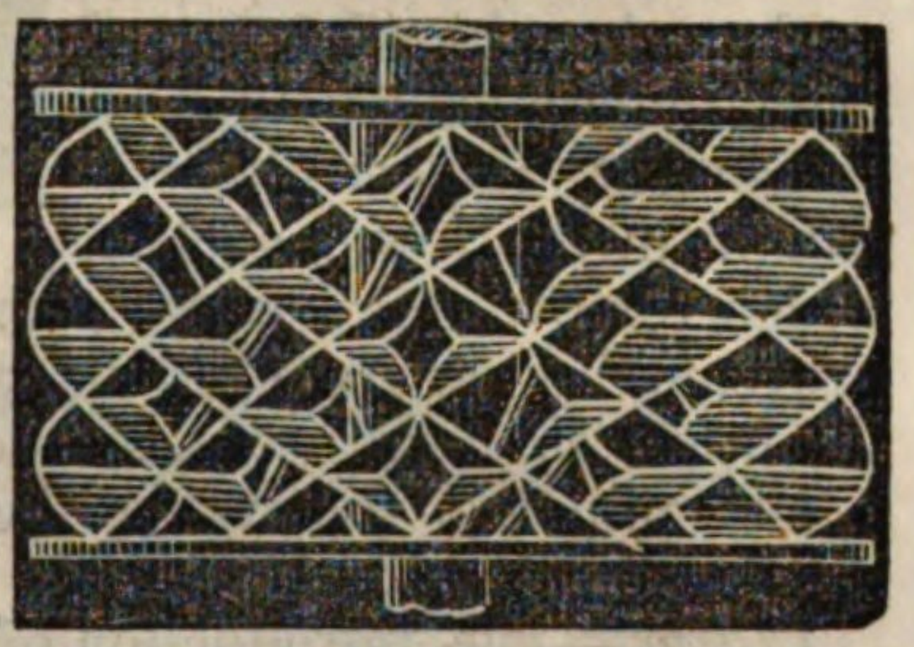
Claim.—Arranging and securing the boxes, in which the ginning rollers operate, in a revolving or adjustable frame or box, or its equivalent; so that the rollers can be adjusted or set at such an angle as may be requisite or desirable, so as to discharge the seed, or facilitate the falling from the rollers, after the cotton is drawn off by the roller. Also, giving to the feeding aprons different velocities, for the purpose of spreading, distributing, or drawing apart the balls of cotton; so that sand and dirt may fall out, and not be carried to the ginning rollers. Also, passing the cotton, after it is ginned, between double aprons, or equivalent devices, when the aprons move with less velocity than the ginning rollers, for the purpose of compressing and making more compact the cotton after it is ginned.

No. 9,999.—Thomas Warner, of Chicopee, Mass.—*Improvement in Twisted Gun-Barrels.*—Patented September 6th, 1853.

The object of this invention is to produce a gun-barrel that will resist more effectually the explosive force of gunpowder. A bar of iron, of suitable quality and size, is first heated (equally and sufficiently), and then twisted in the manner of a strand of rope; the twisted bar is then upset (endwise), and the calibre, of any desired size, bored out.

Claim.—A new manufacture of gun-barrels, made out of a solid bar, with the fibres of the metal having a gradually increased twist, from the inside to the outside of the bar. Also, in the process, making twisted barrels, by twisting a bar of metal of the required size when in a heated state, and then boring out the calibre, in the manner and for the purpose specified.

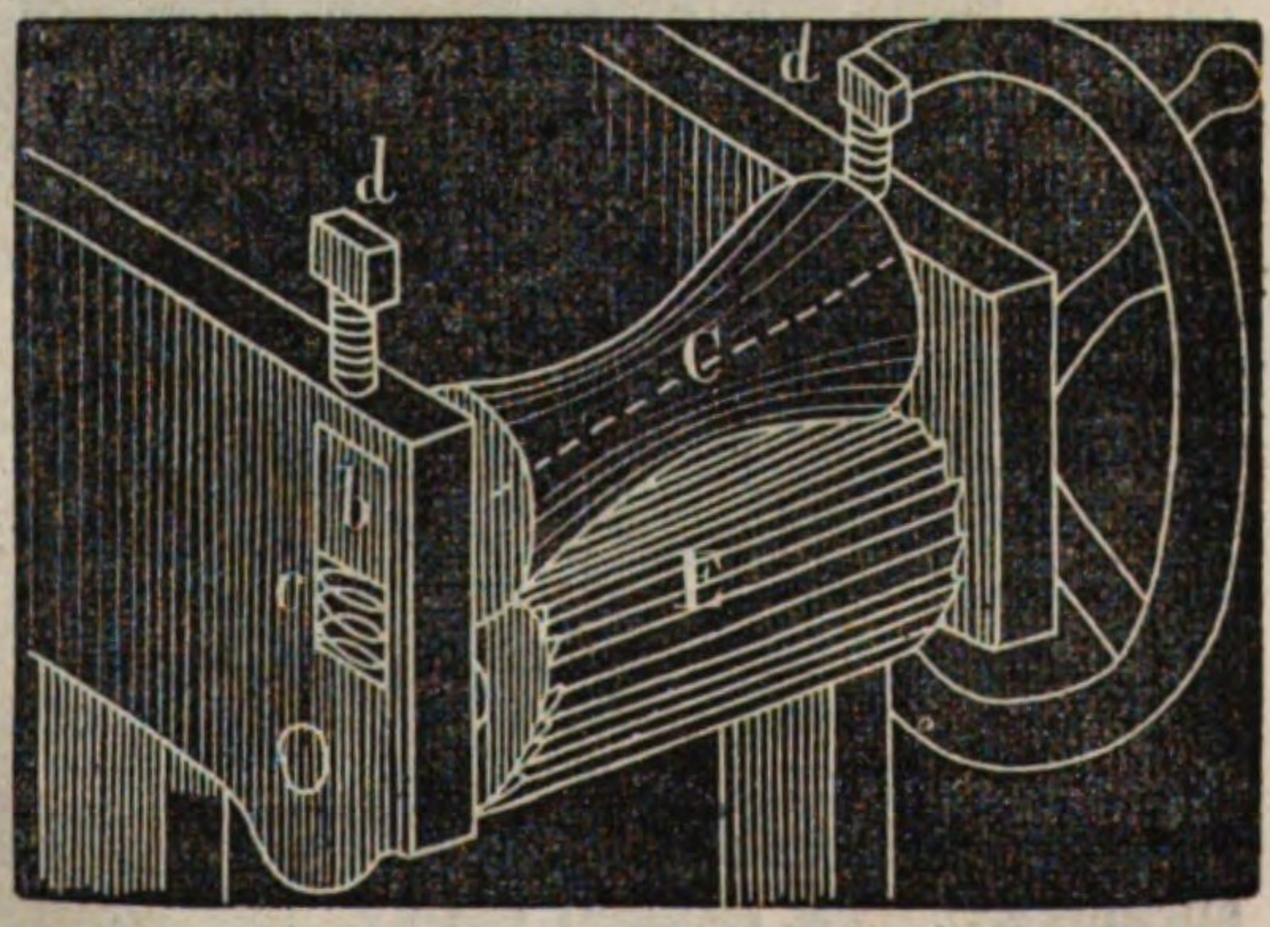
No. 10,000.—Benjamin Irving, of Green Point, N. Y.—*Improvement in Paddle-Wheels for Propelling Vessels.*—Patented September 6th, 1853.



The floats are arranged with their outer edges in lines running spirally round the wheel in opposite directions, at angles of about 75° to the axis; the crossing of these lines forms rhomb-shaped buckets, which have no openings except from and towards the centre of the wheel. The inner openings of the buckets are contracted endwise, for the purpose of giving the front angles such a form as to prevent back-lift in rising from the water; which makes the inner openings depart from the rhombic form, inasmuch as the side angles are cut off, and the figure is made six-sided. Close inside of the rings, a number of half-buckets are formed, of triangular shape.

Claim.—Arranging and combining the floats so as to form a series of buckets of rhombic or substantially similar form.

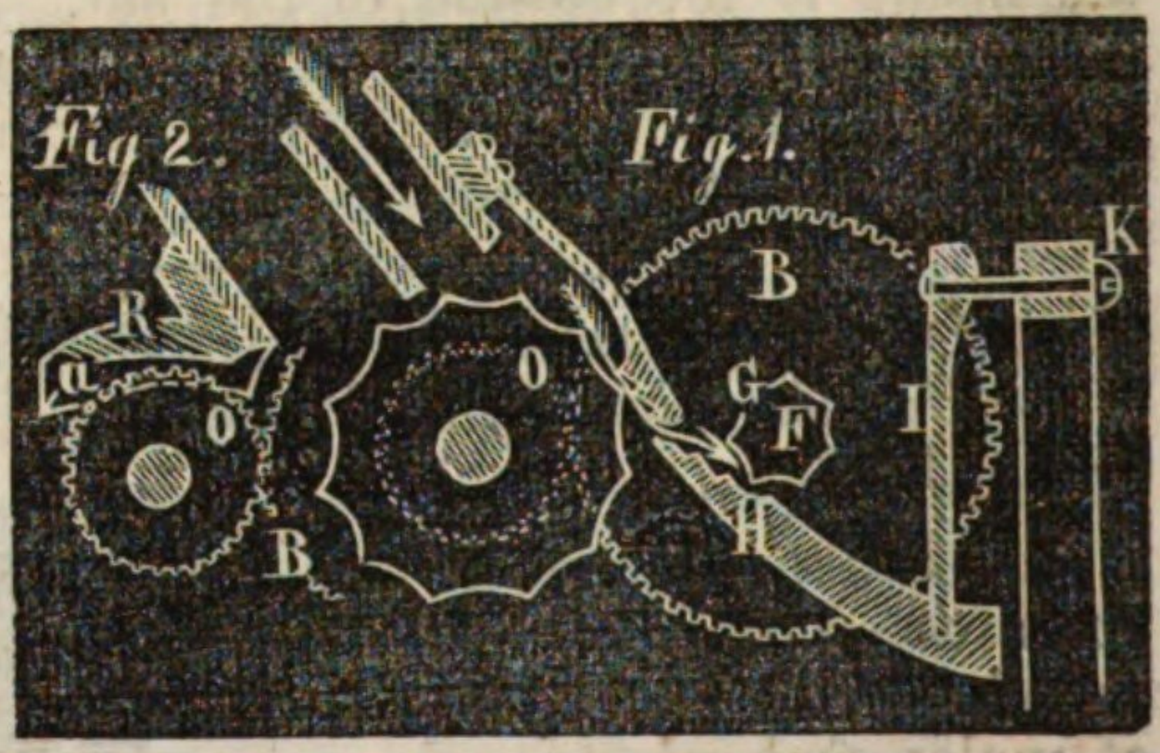
No. 10,001.—Thomas Allison, of Milton, N. Y.—*Improvement in Straw-Cutters.*—Patented Sept. 6th, 1853.



The nature of this invention consists in the employment of a peculiar shaped adjustable roller c (see fig.), which has its axis set at an angle to the axis of the feed-trough, in combination with a cylinder E, of straight knives, which are set longitudinally round its periphery; the roller being designed, by its shape and position, to facilitate the feeding of the straw, in such a manner as to cause the knives to operate upon the straw as effectually as though they were made spiral, and set obliquely round the cylinder. The object is to obviate the difficulty attending the sharpening of the spiral knives now in use, and save ex pense in constructing the same.

Claim.—The above description embraces the claim of the inventor.

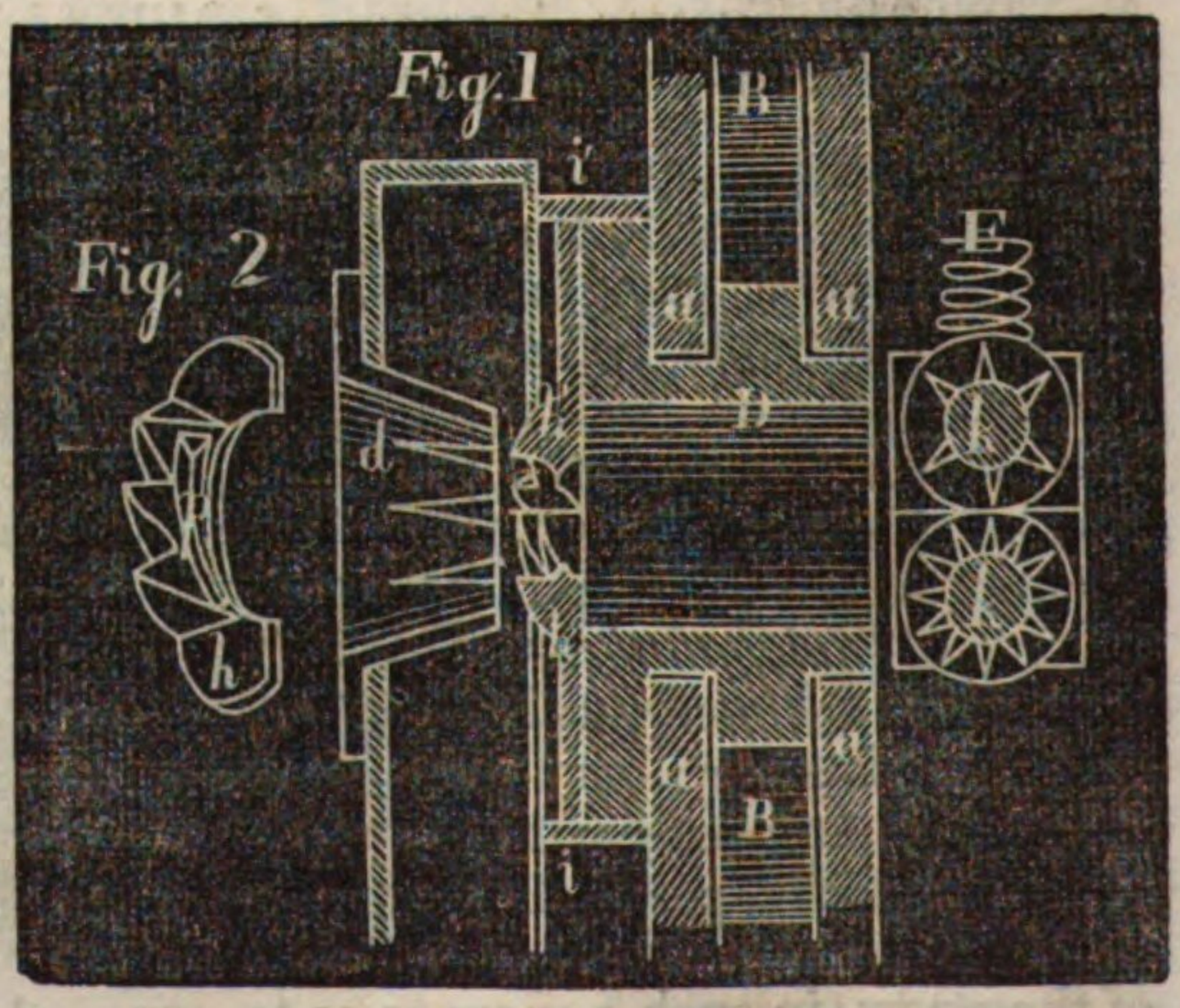
No. 10,002.—Levis H. Davis, of Kennett Square, Pa.—*Improvement in Corn-Shellers.*—Patented Sept. 6th, 1853.



This invention consists in placing below the common shelling-apparatus, another shelling-wheel G, upon the shaft F of the picker-wheel B, having in front a toothed arm H, attached by a spring I to the frame of the machine, so that when the cob is issued from the upper shelling arrangement, its extremity is caught in the lower sheller, which removes the kernels remaining upon it, and at the same time prevents the ear from falling suddenly and imperfectly stripped from the upper sheller. Also, in adding to the covering of the cog-wheel B, and pinion o (operating the machine), flanges *a*, on each side, to prevent the admission of grain to the gearing.

Claim.—The introduction of the wheels G and arms H, attached to the springs I, and regulated by the screws K, as described; for the purpose of stripping the ear of its kernels. Also, the flanges *a*, upon the gear-covering R, for protecting the gearing from the admission of shelled corn.

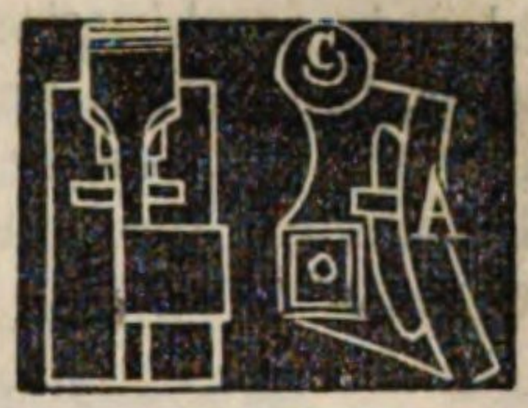
No. 10,003.—Porter Dickinson, of Amherst, Mass.—*Improvement in Corn-Shellers.*—Patented September 6th, 1853.



This improvement consists in the addition of a pair of toothed rollers to corn-shellers (similar to that patented by J. W. Gordon, Oct. 7th, 1846), which seize the cob after the corn is shelled from it, and drag it entirely through the machine (see fig.). B, gearing; D, hollow tube; *a*, bearings of tube D; *d*, guides; *h h'*, toothed shellers, pressed towards each other by springs *i i'*. *k k*, toothed rollers, the lower one revolving, and the upper one pressed down by springs E.

Claim.—The combination of the revolving spring shellers *h h'* with the toothed rollers *k k'* operating in the manner substantially as described.

No. 10,004.—Stephen Morse, of Springfield, Mass.—*Improvement in Iron Car-Brakes.*—Patented September 6th, 1853.

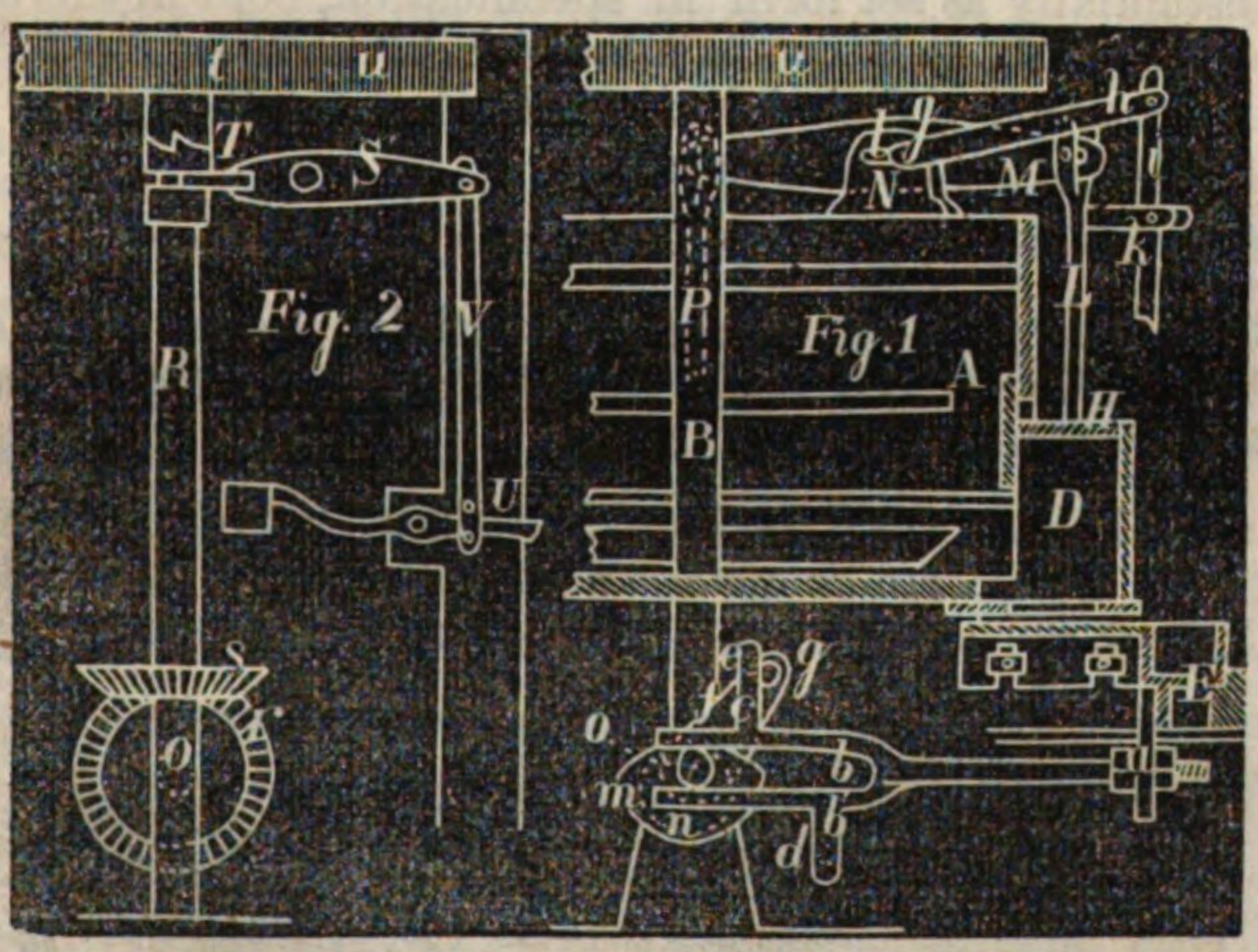


The nature of this invention consists in providing a brake, of cast metal, constructed so that the friction surface A (see fig.) will be worn off before impairing other portions, caused by the great heat generated when in operation. Also, in constructing it in one solid mass, thereby dispensing with bolts and pins. Also, in placing the point of suspension in such position that the brake, when relieved of pressure, will disengage with the wheel by its own gravity. C is the point of suspension.

Claim.—The spine, having the point of suspension C, and socket, with the open spaces and brace plates, in combination with the rubber or friction surface plate A.

No. 10,005.—Hiram Sands, of Cambridge, Mass., and Gary Cummings, of West Derby, Vt.—*Improvement in Brick Machines.*—Patented September 6th, 1853.

Figure 1 is a section of the apparatus; A, pug-mill; E, mould-carriage; D, mould-charger; H, piston within the mould-charger, which forces the clay out of the bottom of the charger into the brick-mould;



the rod L of the piston is jointed to the front end of lever M; N is the slotted bearing of lever M, which has a movable fulcrum *g*, which is attached to a connecting fork *h*, worked by a lever *i*, that turns on fulcrum *k*. Fig. 2 represents a front view of the apparatus. Lever M is worked by cams *m* and *n*, connected to rod *p*; *o*, horizontal shaft connected to vertical shaft R by bevel-wheels *r s*. The machine is used to temper the clay and press the brick.

Claim.—The modification of such arrangement, by substituting for the shaft with reversing gear, the shaft with continuous motion, operating the carriage, and producing the intervals of rest, by means of the crank-pin acting alternately upon studs *d* and *e*, connected with the

mould-carriage, whereby greater certainty and precision of action in the machine, with greater simplicity and durability, are obtained. Also, in combination with the piston and the lever M, the slot in the lever, the slotted bearings of the movable fulcrum-pin, the connecting fork and hand-lever; the same being for the purpose of increasing or diminishing the amount of pressure of the piston on the clay in the mould.

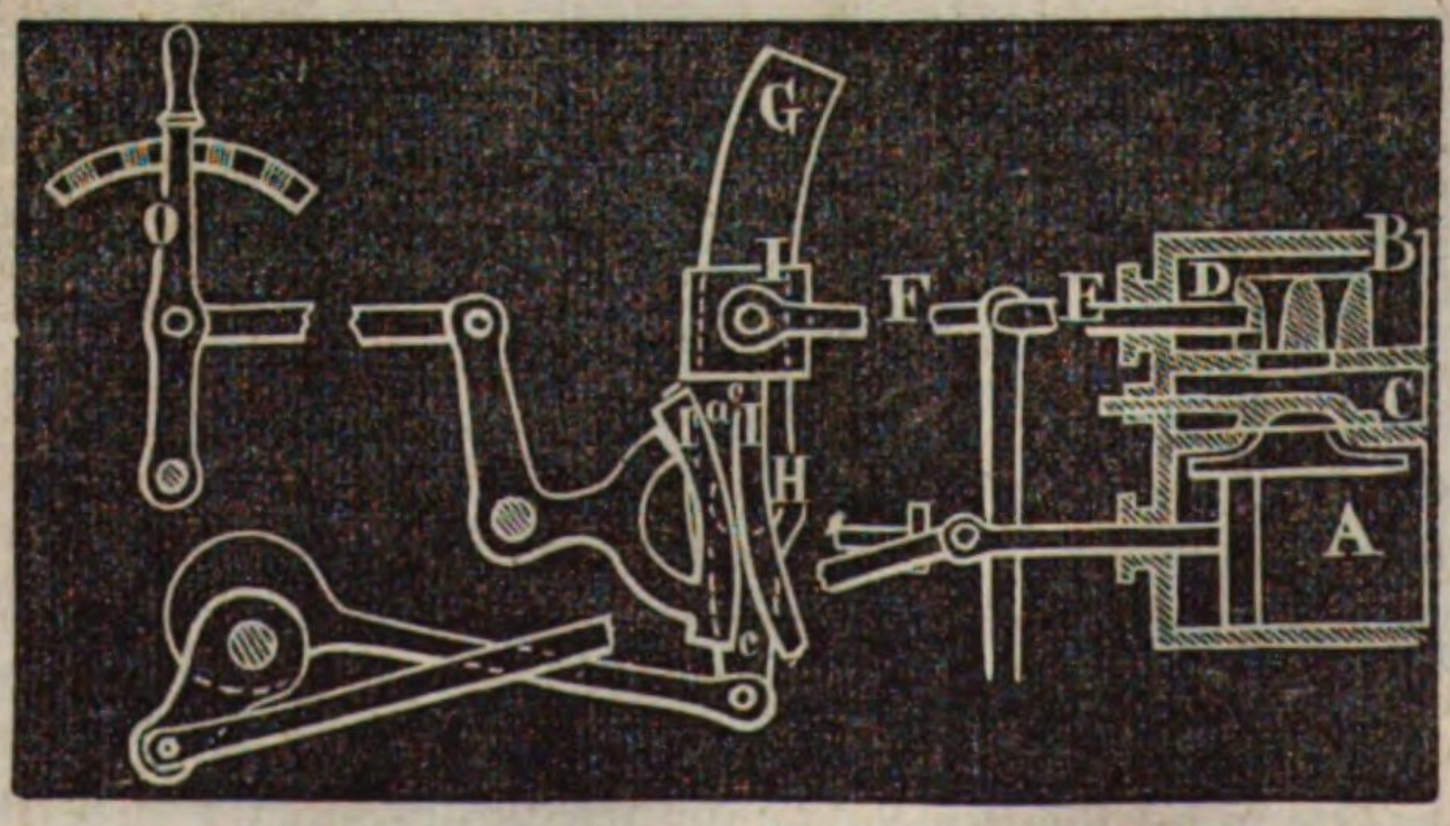
No. 10,006.—SAMUEL H. TURNER, of Brooklyn, N. Y.—*Improvement in Printers' Ink.*—Patented September 6th, 1853.

This improvement consists in the employment of "colophonic tar," in connection with other ingredients, in the manufacture of printing-ink. Also, in the employment of colophonic tar as a printing-ink varnish. What the inventor denominates colophonic tar, is the tarry residuum remaining in stills after the various stages of distillation, commonly employed in obtaining colophonic oil. The ingredients and the proportions are as follows: colophonic tar, 14 lbs.; fine lamp-black, 3 lbs.; fine pulverized indigo-blue, 8 ounces; fine pulverized Indian red, 4 ounces; yellow rosin soap, 1 lb. The ingredients are mixed by the aid of heat.

Claim.—The employment of colophonic tar, produced and combined substantially as set forth in specification, both in the manufacture of printing-ink, and also as a varnish to be used by printers, to modify the condition of their ink to suit the temperature of the weather and the kind of work to be executed.

No. 10,007.—MATTHIAS W. BALDWIN, of Philadelphia, Pa.—*Improvement in the Gear of Variable Cut-off Valves for Steam-Engines.*—Patented September 13th, 1853.

A, steam-cylinder; B, valve-chest; C, exhaust-valve; D, independent cut-off valve. The stem E connects by a rod F with a vibrating arm G, on rock-shaft H. F is jointed to a block I, that slides up and down



upon the arm. Block I has a stem I′, which is connected by straps *a a* and *c c* to a quadrant J; O, hand-lever.

The object to be attained by this invention is to obviate the rubbing

of the sliding-block upon the arm, while the arm is vibrating, and the rapid wearing out of that part of the arm on which the block is most used.

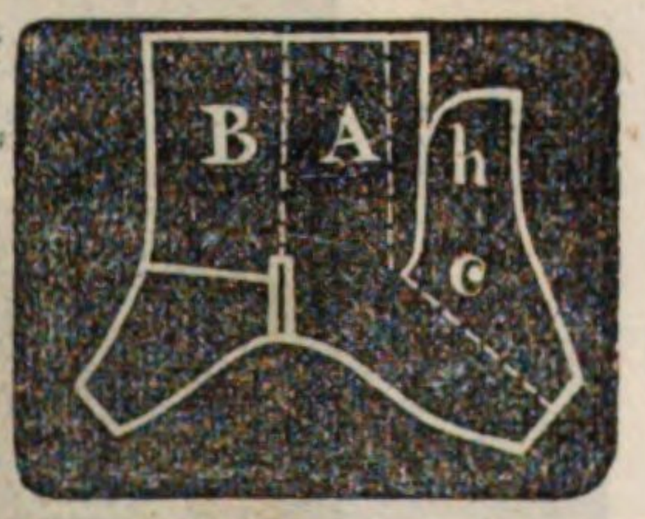
Claim.—The arrangement of the sliding pivot-block I, fitted with a stem I′, connected with a sector J, by straps, chains, or cogs, the hand-lever O, and the intermediate connecting mechanism.

No. 10,008.—JOHN CHILCOTT and ROBERT SNELL, of Brooklyn, N. Y.—*Improvement in India-Rubber Soles for Boots and Shoes.*—Patented September 13th, 1853.

The sole is made of three parts, viz., the india-rubber sole, a leather lining, and a leather border or edge. The india-rubber sole is made smaller than the sole it is intended to cover, and it has its edges bevelled off thin all round; the leather lining is of the full size of the bottom of the boot or shoe, and is united to the upper side of the india-rubber sole by water-proof adhesive material, leaving a margin of the lining all round the edge of the india-rubber part; the leather border or edge is of the same thickness as the india-rubber sole, and overlaps the bevelled part of it, and is also bevelled so that its outer face will be level with the outer face of the india-rubber. Thus is made the solid sole, of uniform thickness, which may be secured to a boot or shoe, by sewing, cementing, or pegging.

Claim.—Connecting the whole or any portion of the sole of a boot or shoe, substantially as described, of india-rubber, with its inside or edges covered and protected by leather, which is united with it by any water-proof cement, with or without stitching, and forms a hard, firm leather-edge.

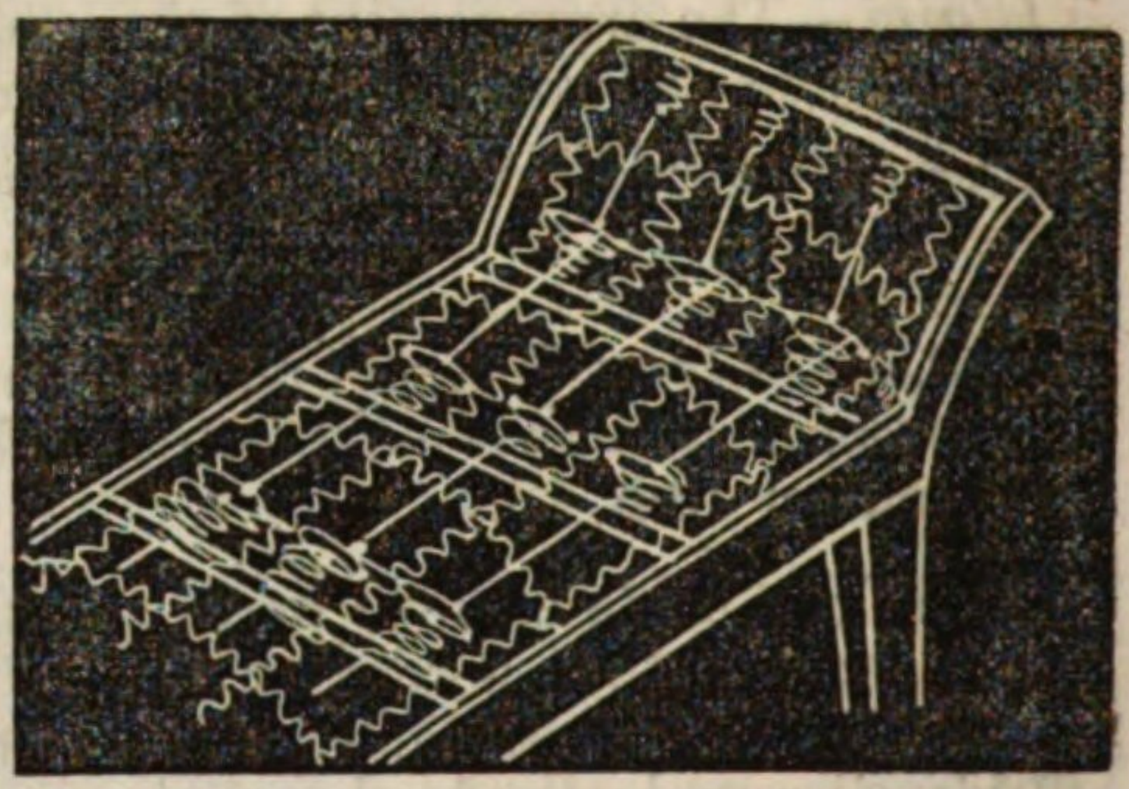
No. 10,009.—JOHN CHILCOTT and ROBERT SNELL, of Brooklyn, N. Y.—*Improvement in Boots.*—Patented September 13th, 1853.



This improvement consists in cutting a boot out of a piece of leather, in such a form as not to require crimping (see fig.)

Claim.—The form of the piece of leather or other material, substantially as shown in the figure and described in the specification, by which the upper leather of a boot is made, so as to fit any leg, foot, and heel (not deformed), of one piece, without crimping or joining other pieces thereto; one half or side of the boot is formed of a part A, without joint, and the other half by the junction of a part B, folded from the back of the side A, and a part *c h*, which is partly cut from, or which, when flat, lies close or near to the front of A above the instep, and partly folded over from the instep; the part *c h* being of such form as to form one side of the foot, and extend round the heel to the other side A, and cover an opening made in the lower part of the back, to give the required form to the heel, and make part of the necessary stiffening.

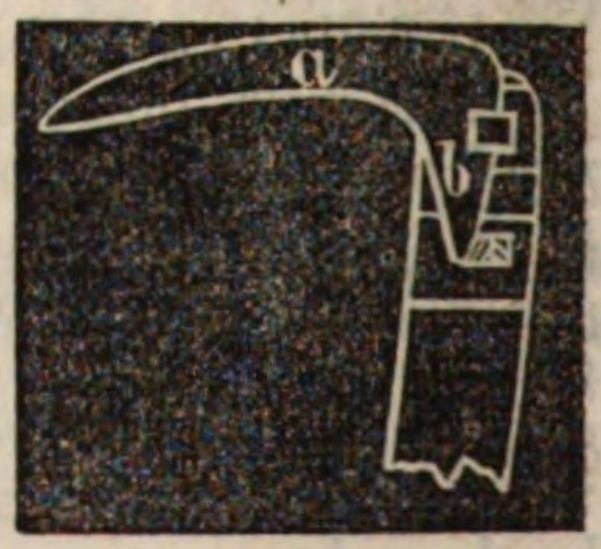
No. 10,010.—Pierre Demeure and Auguste Mauritz, of New York, N. Y.—*Improvement in Bed-Bottoms.*—Patented September 13th, 1853.



(By reference to the figure, the claim will explain the nature of this invention.)

Claim.—The manner of constructing the spring-mattress, by combining the vertical springs with an elastic or spring net-work of spiral metallic springs, for supporting the vertical springs or for increasing the elasticity, so that a person lying on the bed will be equally supported on all sides.

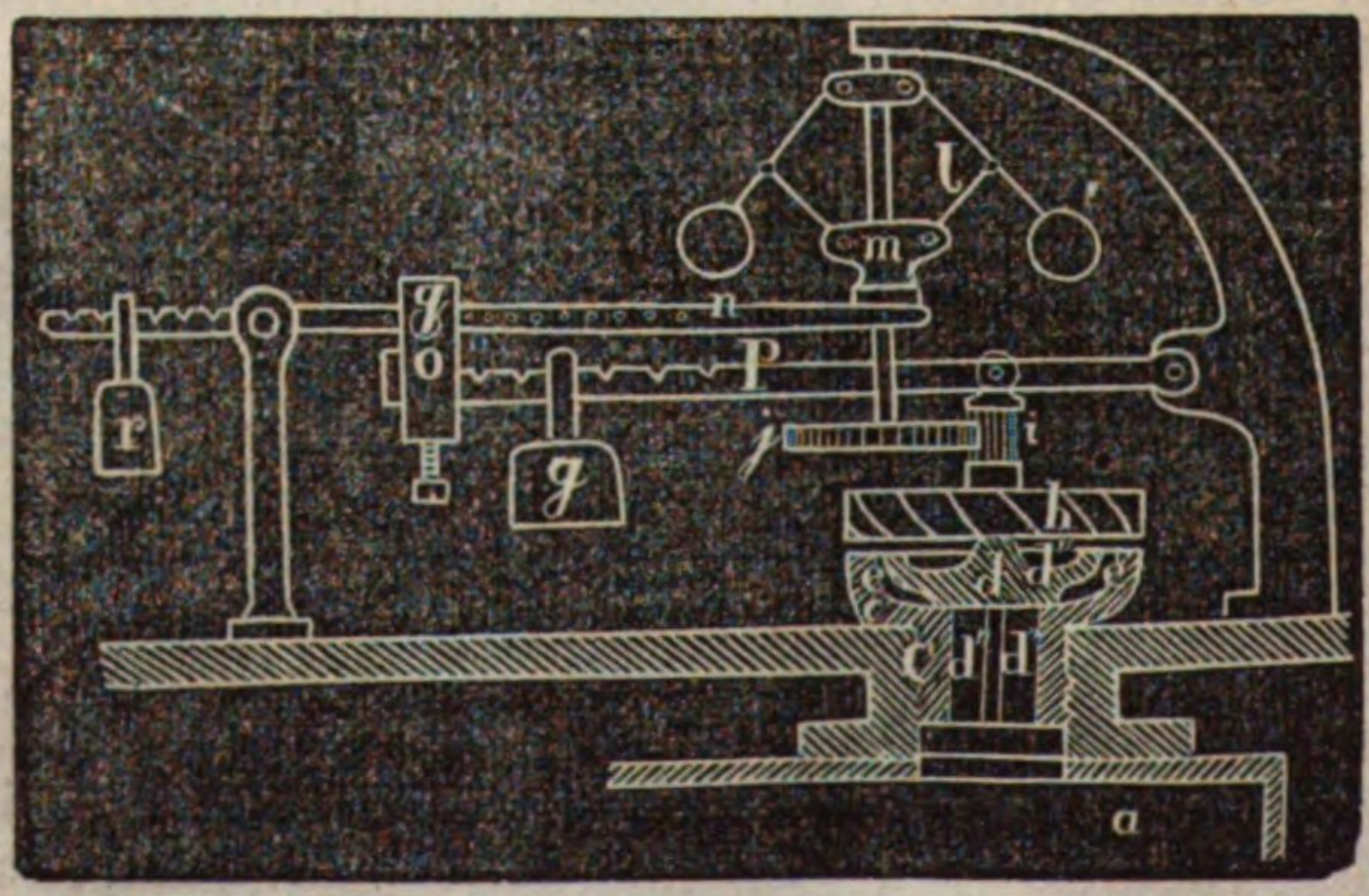
No. 10,011.—William P. Greenleaf, of Washington, N. H.—*Improvement in Scythes.*—Patented September 13th, 1853.



a is the scythe-blade; *b*, the cutting edge, which is curved. The fastening is so accomplished as to leave the shank entirely free along its inner edge.

Claim.—Widening and curving the blade of the scythe at the shank, for the purpose of strengthening the same, and adapting it to cutting bushes as well as grass.

No. 10,012.—Zadok H. Mann, of Cincinnati, Ohio.—*Improvement in Safety-Valves for Steam-Boilers.*—Patented September 13th, 1853.

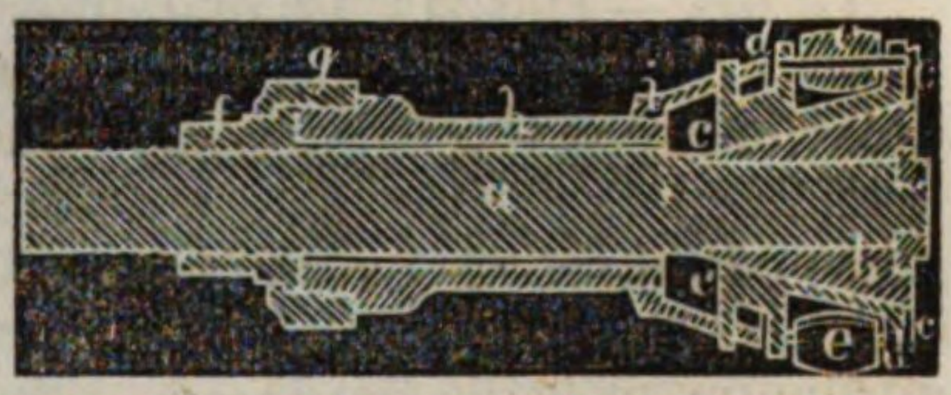


This invention has for its object, to insure the opening of the valve at the desired time, of the maximum of pressure; and, also, so as to increase the size of opening in proportion to the force of steam, and thus insure an adequate vent for the steam under all circumstances, and thereby remove all danger or possibility of explosion, with a suitable boiler. *a*, boiler; *e e*, channels for the steam to escape, formed

by the cup-like rims of the valve *d* and its seat c; *i* is a pinion, and *j* a spur-wheel, which transfer rotary motion to the governor *l*, whose sleeve *m* is connected to lever *n*. Lever *n* is connected with main lever r by a link *o*. Link *o* can be fastened to any one of the holes in lever *n*, by the pin *q*, in order to determine how much the play of the balls shall lift the valve; *r* balances the governor; *h* is the flutter-wheel.

Claim.—The construction and application to a safety-valve, of flutter-wheel, governor, and supplementary lever, or equivalent devices, in order to insure promptness of action and an increase of vent, according to the force of steam, with or without the adjustable link and counter-weight.

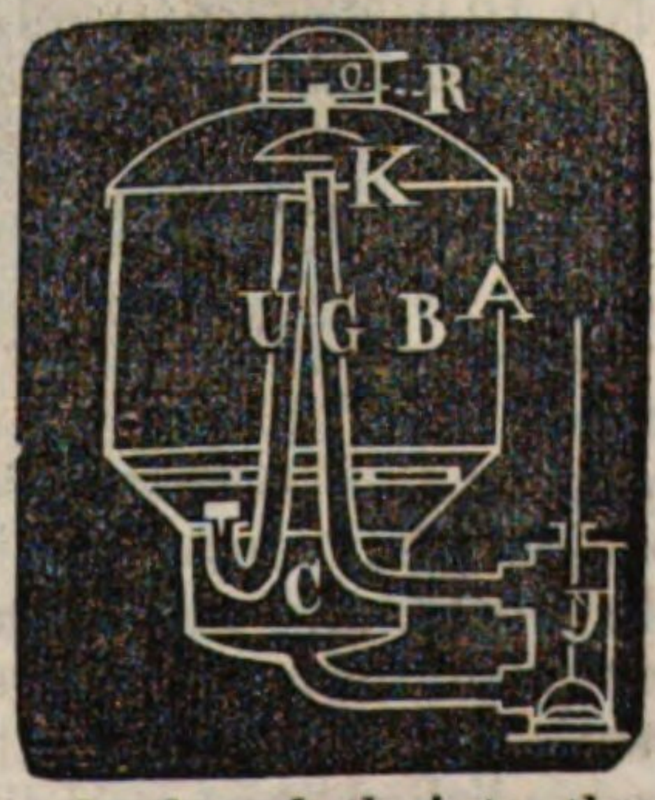
No. 10,013.—George Potts, of Cincinnati, Ohio.—*Lining Cast-iron Cylinders with Copper.*—Patented September 13th, 1853.



To perform this operation, a cylindrical sheet of copper is placed within the iron barrel, and the tool (see fig.) is advanced by suitable mechanism, until the rollers are just entered within the limits of the casing; the nut is screwed down so as to force the rollers apart as much as is requisite to commence the lining process, and the tool is then rotated and gradually advanced along the interior of the cylinder until it reaches the other end. *a* is the mandrel; *c c*, grooves of the conical head; *f*, nut; *g h i*, sleeve; *e*, cast-steel rollers.

Claim.—The revolving mandrel, furnished with one or more rollers, whose distance from the axis of the mandrel can be increased or diminished by means of a nut, sleeve, and conical head, or any equivalent device, for the purpose of lining with one metal the interior of a cylinder formed of another metal.

No. 10,014.—Andrew Robeson, Jr., of Newport, R. I.—*Improved Mode of Bowking or Bucking Cloth.*—Patented September 13th, 1853.



The goods to be bucked or bowked are laid in chamber B. of the kier A, and around the pipes G and U, the chamber B being packed with the goods nearly up to the level of the top of the pipe U; the scouring or bowking liquor is placed in the chamber C, and such chamber is to be heated, or not, as occasion may require. The liquor is forced up by the force-pump *y*, through the pipe G, against the deflector K, by which it will be distributed upon the top surface of the cloth. The introduction of steam into the chamber B will aid the filtration of the bowking liquor through the cloth into the chamber C. In case more steam is introduced than is necessary to

cause the liquor to descend through the cloth, the safety-valve v will be forced open.

Claim.—The employment of a closed kier or vessel, above described, and extracting the bowking liquor from the lower part of it, and forcing it into the upper part of it, while steam is being injected only into the upper part of the vessel, and on the top of the goods; whereby, while the bowking liquor is being thrown on top of the mass of goods, the steam is constantly and simultaneously made to press upon and pass into and through the goods, and facilitate the action of the bowking liquor, and its passage through the cloth.

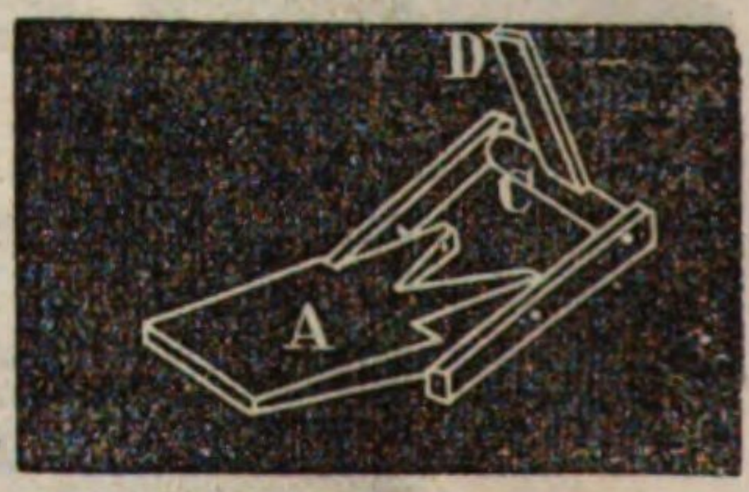
No. 10,015.—Hervy S. Ross, of Cincinnati, Ohio.—*Improvement in Fences.*—Patented September 13th, 1853.

The object of this invention is to so construct a fence, that it can be conveniently removed from one place to another.

Claim.—The zigzag and interlocked arrangement of panels, supported by a swivel-joint to posts at suitable intervals, and having the joint between the two middle panels furnished with inclined hook and eye, each of said middle panels being provided with boards sloping in opposite directions, so that by the action of a flood, each half of the intervening line of panels may separate midway, and swing in direction of the current; or devices substantially equivalent.

No. 10,016.—Samuel B. Sumner, of Grantville, Mass.—*Improvement in Boot-Jacks.*—Patented September 13th, 1853.

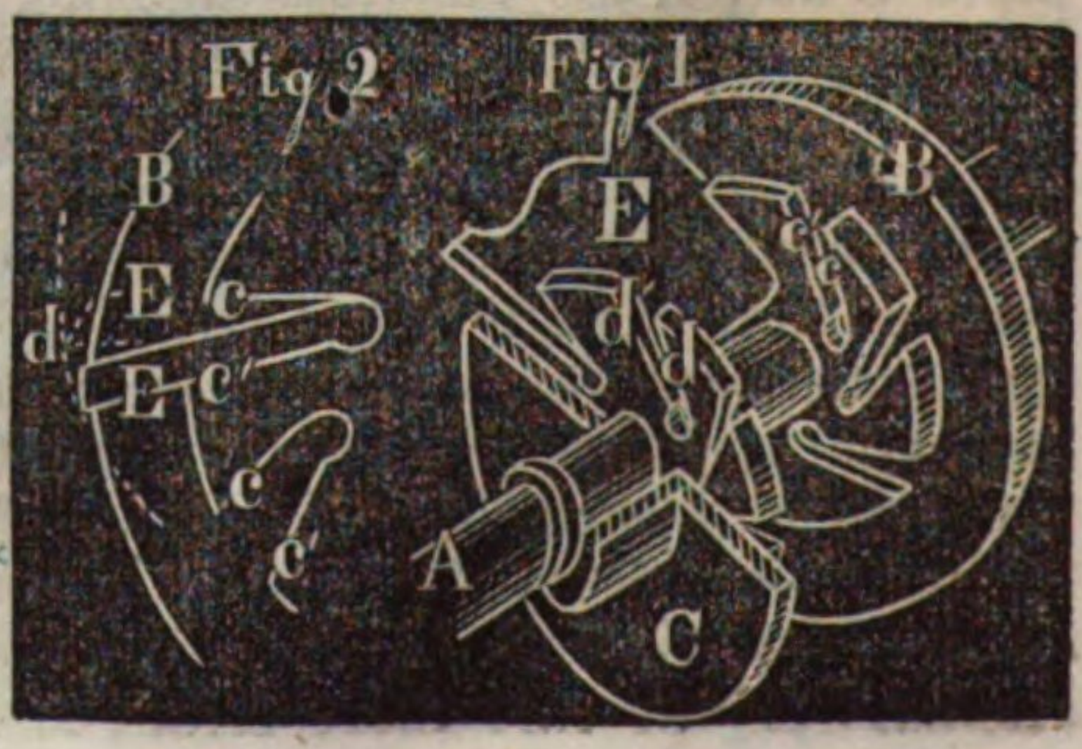
One foot being placed upon the body of the jack to keep it steady, the heel of the other foot is placed between the jaws, and the bar D being grasped by the hand, the shaft C is pressed down upon the toe of the boot, by which means it is easily withdrawn.



Claim.—The application to an instrument for taking off boots, of the side-bars, the shaft C, and the bar D, arranged and operating in the manner set forth.

No. 10,017.—Josiah M. Smith, of New York, N. Y.—*Improvement in Cutter-Heads for Moulding-Machines.*—Patented September 13th, 1853.

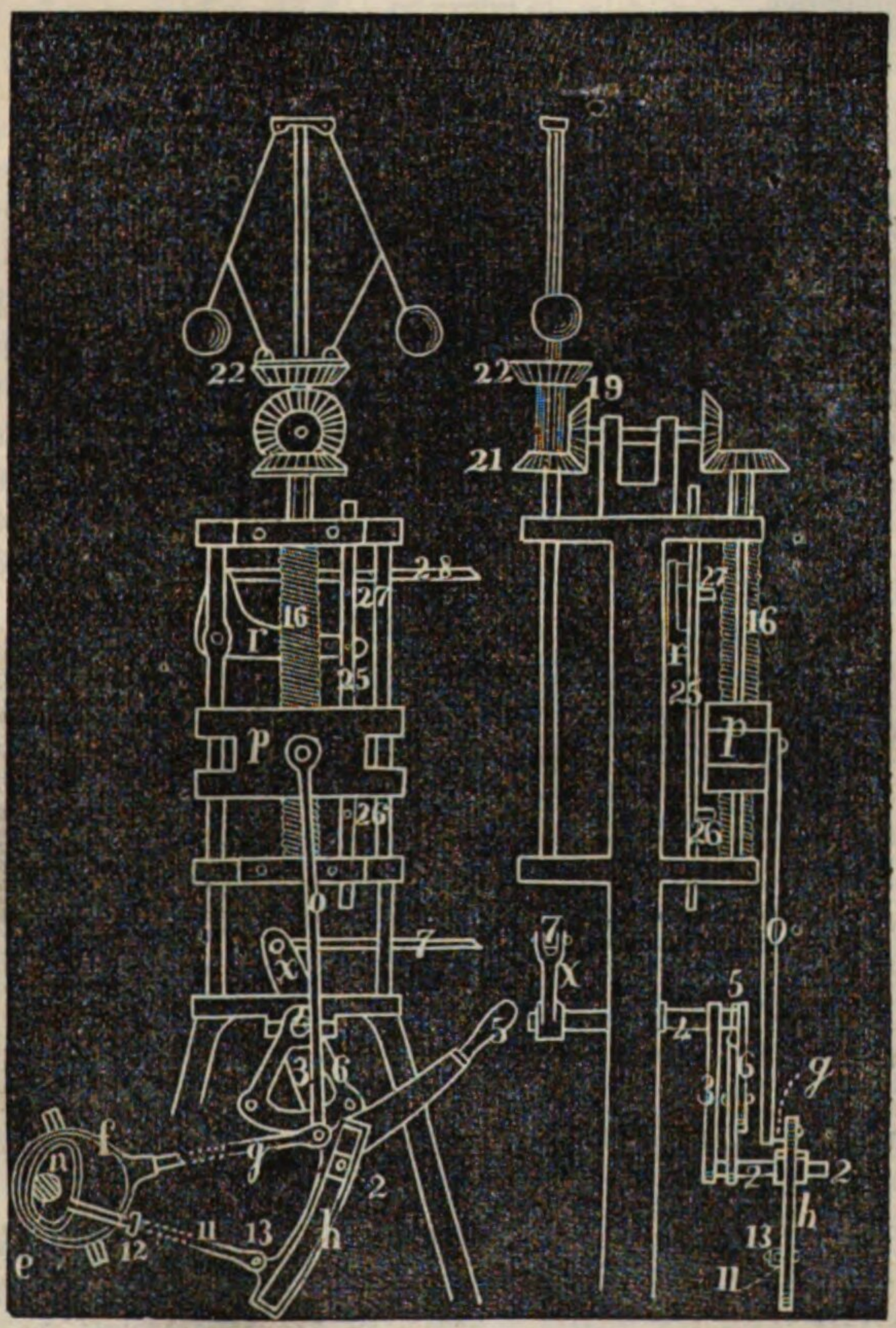
This invention consists in an improvement in the construction of cutter-heads for cutting mouldings in wood, marble, and other like materials. The object of this invention is to put in order, and afterwards keep in order, the cutting edges of the series of chisels; which is accomplished by grinding the chisels while they rest in their



slots, against the sides c' d'. (See fig.) But during the cutting process (the motion being in the opposite direction), the chisels rest against the opposite sides c d of the slots, and consequently present cutting edges d, as seen in fig. 2 in dotted lines.

Claim.—The combination of the supporting slotted flanges, or their equivalents, with the chisels, hinged and operated in the manner and for the purposes as set forth.

No. 10,018.—Richard H. Townsend, of New York, N. Y.—*Improvement in Valves for Steam-Engines.*—Patented September 13th, 1853.



This invention consists in the combination of the eccentric f and cam n, the eccentric working as usual to give the engine steam nearly the entire stroke; the cam is so shaped that when it is brought into operation, the valve is moved in such a way as to cut off at the smallest part of the stroke at which the engine is required to work. These motions are combined by means of a sector h, operated on by the governor. In case the valve does not supply the required steam, the throttle-valve is opened farther, by a peculiar apparatus.

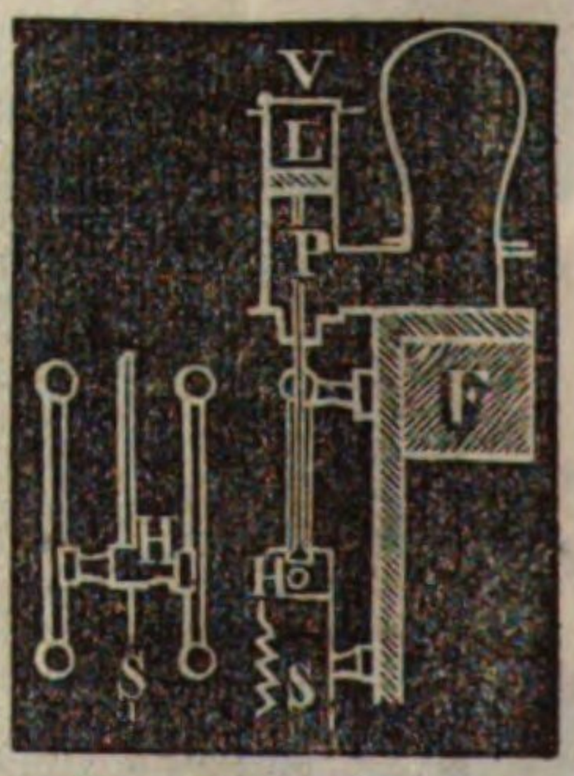
Claim.—The combination of a cam and eccentric, by means of the sector *h*, or its equivalent, to operate upon the valve, or parts that move the same, and cut off or work with the full pressure, by the eccentric, according to the position of said sector. Also, adjusting the position of the sector *h*, by means of the governor, through the screw or other suitable means, whereby the governor regulates the position of the sector, to communicate the desired motion to the valve of the engine, from the eccentric or cam, or both, according to the power required from the engine. Also, the rod 25, and points 26 and 27, to take motion from the block *p* at its extremes of motion, and communicate the same by means of the right-angle lever *r* to the throttle-valves.

No. 10,019.—Frederick W. Norton, of Lasswade, Great Britain.—*Improvements in the manufacture of Plain and Figured Fabrics.*—Patented September 13th, 1853.

(To fully explain the nature and operations of these improvements would require too much space for this Report.)

Claim.—The manufacture of woven fabrics by cross-weaving, by carrying the cross-warp alternately over a stationary warp, and binding the cross-warp on each side of the stationary warp by a shot of filling. Also, carrying contiguous movable cross-warps over and across each other's path, and over one or more stationary warps, and binding the cross-warps to the stationary warps by shots of filling. Also, the manufacture of ornamental fabrics by cross-weaving elongated printed warps.

No. 10,020.—James Rankin, of Detroit, Michigan.—*Improvement in hanging Mill-Saws.*—Patented September 13th, 1853.



The nature of this invention consists in hanging mill and other saws, by providing them at one or both ends with a cylinder and piston, the piston being coupled to the end of the saw by its rod, and then applying atmospheric or other pressure with any elastic fluid, on the side of the piston nearest the saw.

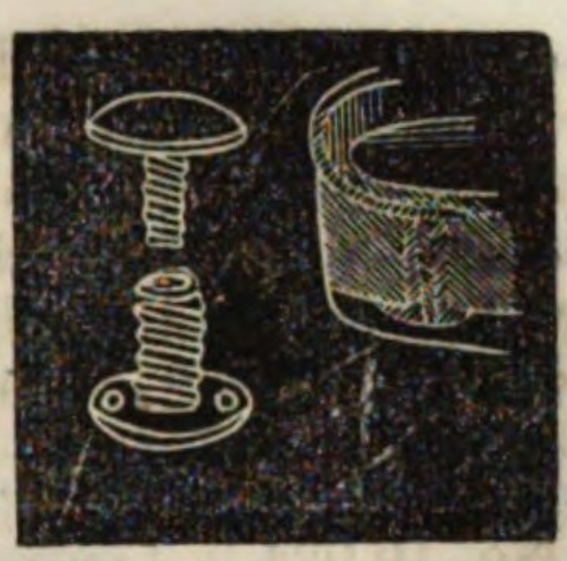
F, frame; S, saw; H, clutch; L, piston; P, piston-rod; V, valve.

Claim.—The arrangement of an air-chamber cylinder and valve, in the manner substantially described, for the purpose of straining saws in motion by the elastic pressure of compressed air, or its equivalent.

No. 10,021.—John Chilcott and Robert Snell, of Brooklyn, N. Y.—*Improvement in Screw-Fastenings for Boots and Shoes.*—Patented September 13th, 1853.

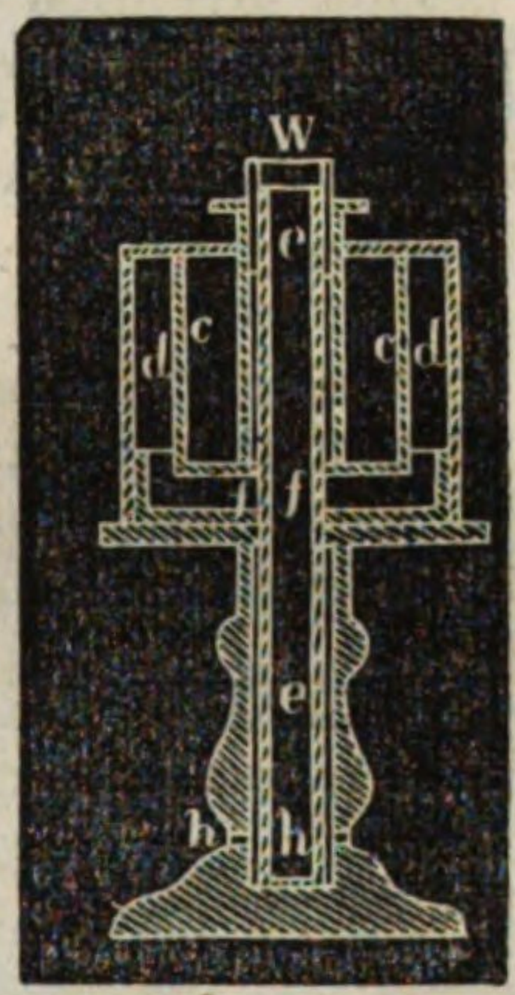
The screw-fastenings consist of a double metal screw, or two male screws of different sizes, of which the larger is hollow, and contains

a female screw to receive the smaller; these screws are inserted through the sole from opposite sides, thus holding the parts securely together. The head of the inner or smaller screw is let into the leather forming the inner sole.



Claim.—The combination (as and for the purposes herein described) of the two screws, of which one forms a nut, and will hold it secure until all worn away.

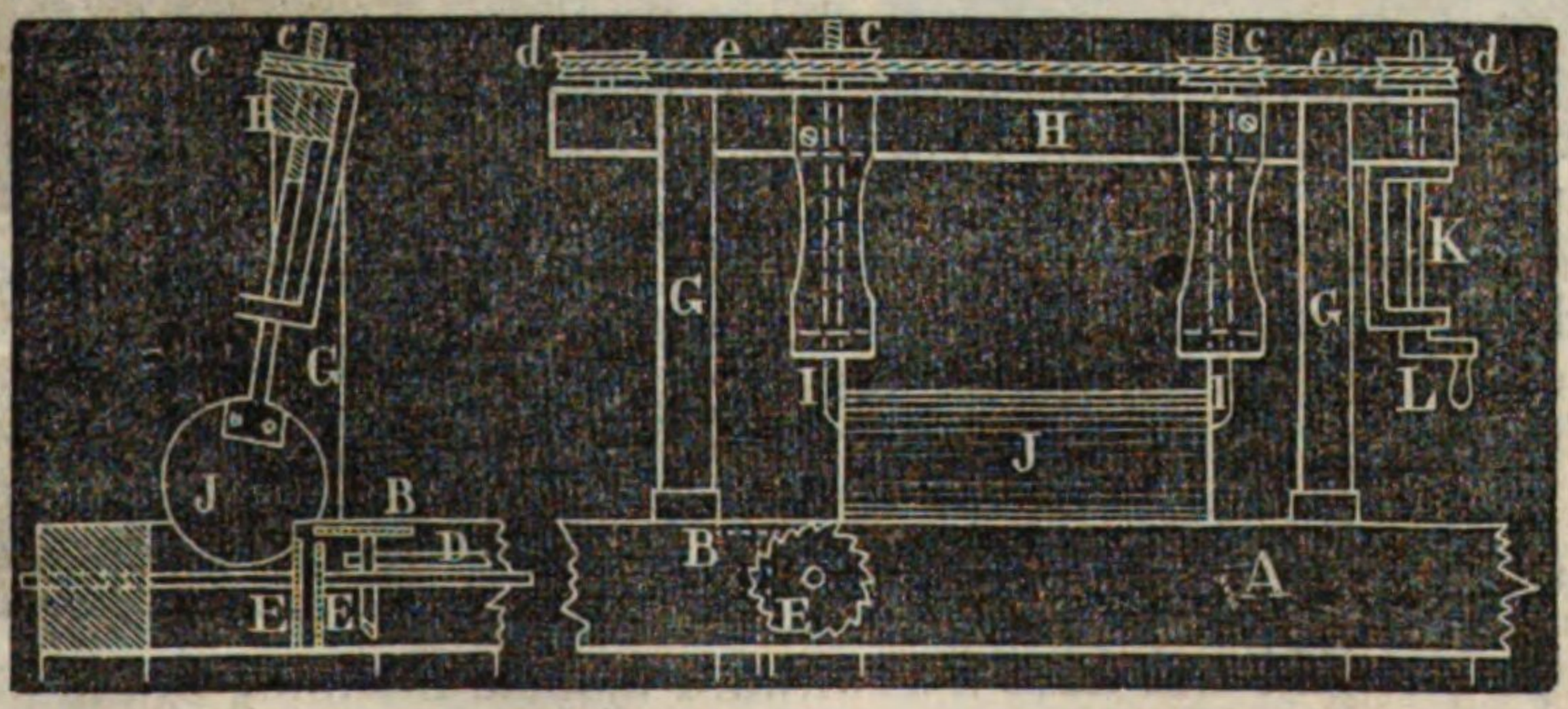
No. 10,022.—LEONARD A. STOCKWELL, of Batavia, N. Y.—*Improved Lard Lamp.*—Patented September 13th, 1853.



c c, cup which receives the lard; *e e*, tube for the heated air to pass down through; *f f*, holes for the heated air to communicate with the lard cup; *d d*, heated air-chamber. As the heated air passes from the chamber to the flame, the chamber is supplied through holes *h h* with cooler air.

Claim.—The combination of the reservoir of a lamp for burning lard or tallow, with an outer covering, so arranged as to form an air-chamber surrounding the reservoir, in the manner and for the purposes mentioned.

No. 10,023.—THOMAS J. ALEXANDER, of Westerville, Ohio.—*Improved Machine for sawing Sticks for Broom-Handles.*—Patented September 20th, 1853.

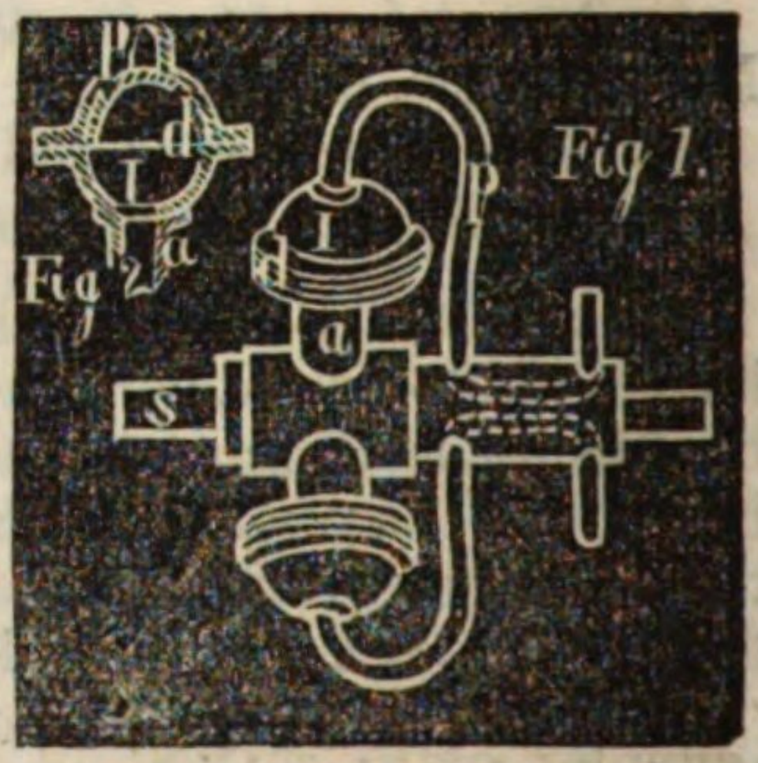


D, bed-piece; B, horizontal saw; E E, two vertical saws; G, frame, sliding on main frame A; H, top cross-piece, swinging on the upright frame G; I I, screw-rods; and *c c*, circular nuts; J, log held by I I; K, shaft; L, crank; *d*, pulley; and *e*, cord.

Claim.—The method (described in specification) of handling and adjusting the log to its place, and to its various positions for the several cuts, by means of the radius rods or clamping screws, coupled and

operated as specified, and suspended by a swinging frame; so that by bearing laterally on the screw-lever or handle whilst turning it, the clamping screws are swung laterally, and raised or lowered simultaneously, to approach the log on the table and convey it with facility to the gauge, and to adjust the log expeditiously when under operation to its various sets laterally and vertically.

No. 10,024.—James Black, of Philadelphia, Pa.—"*Planetary Hydraulic Steam-Engine.*"—Patented September 20th, 1853.

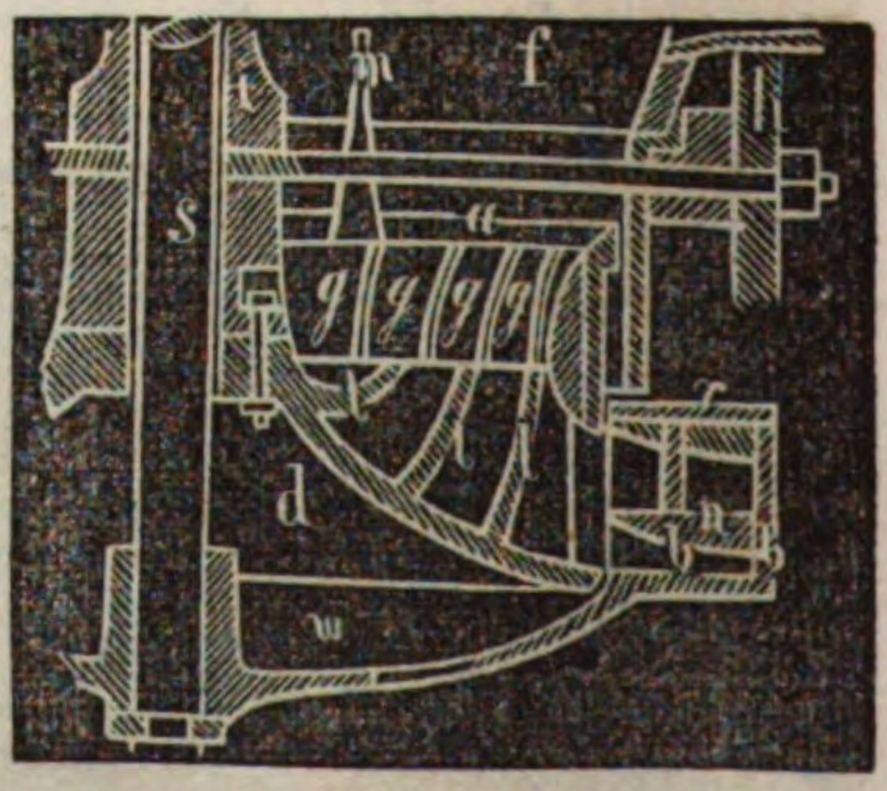


This invention consists in a revolving-shaft *s* provided with four hollow arms *a*, opening into four vessels I upon their ends, which vessels are furnished with flexible diaphragms *d* of vulcanized india-rubber; so that the vessels may be alternately filled with water and steam upon the opposite sides of the diaphragms *d*, without letting the steam come in contact with the water so as to condense it. *p* are supply steam-pipes.

Fig. 1 is a side view of the apparatus, and fig. 2 a section through one of the vessels.

Claim.—The arrangement of the vessels, pipes, and diaphragms, or their equivalents, upon a shaft, so as to revolve with or upon the shaft.

No. 10,025.—Uriah A. Boyden, of Boston, Mass.—*Improvement in Turbines.*—Patented September 20th, 1853.

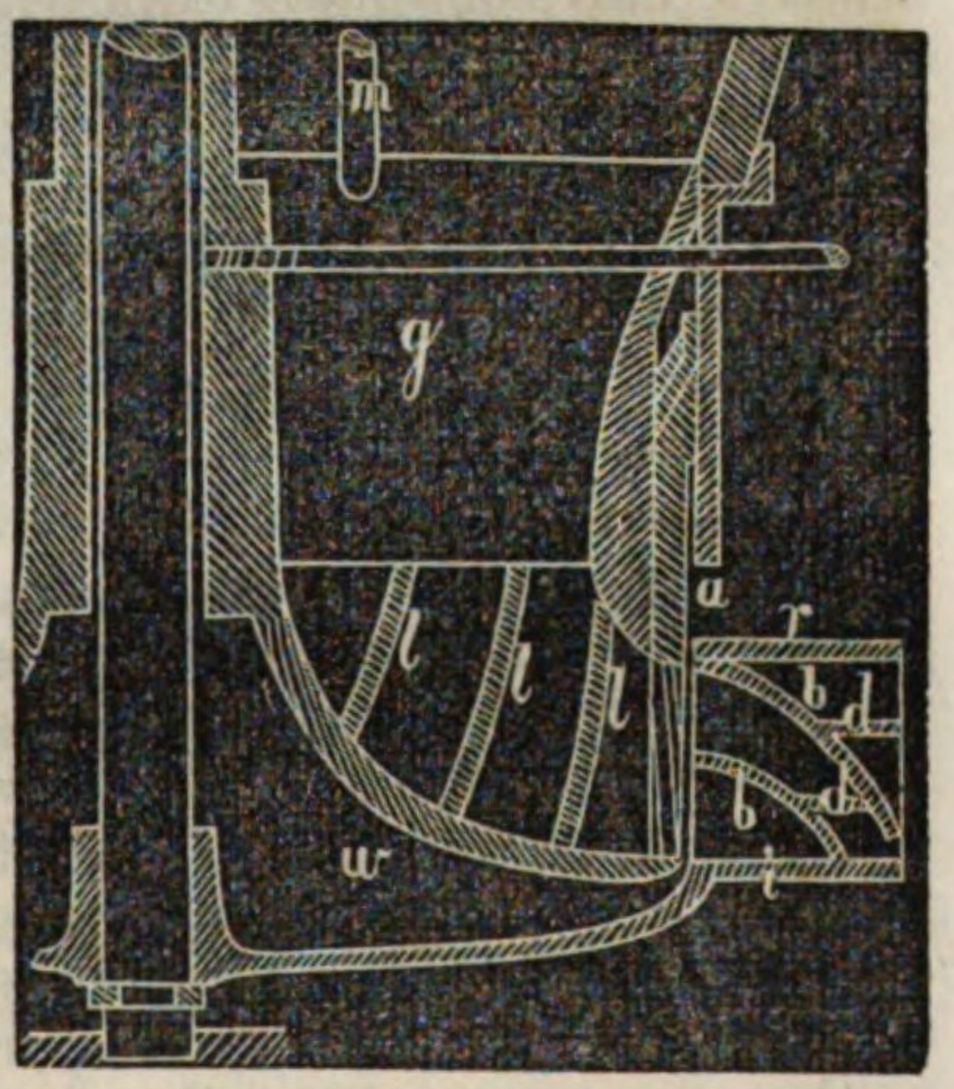


d, disk; *lll*, leading curves or guides; *a*, annular gate; *gg*, lining of gate *a*; *t*, tube; *w*, water-wheel; *r*, rim; *bb*, buckets; *n*, diaphragm; *s*, shaft; *m*, rod to raise gate *a*; *h*, frame; *f*, flume.

Claim.—The leaning or inclining of the leading curves or guides to the plane of the wheel. Also, the making of the inside of the garniture, or the part of the gate next to the disk, or both, of such a curve or form that the water at the upper part of the stream or streams where it leaves the garniture or gate will have a downward motion, inclining to the plane of the water-wheel, and making the upper sides of the passages for the water through the wheel, descending or inclining to the plane of the wheel, from the commencement of the passages next to the gate to about half way from the inner to the outer edge of the upper rim of the wheel, where they are nearly or quite horizontal, or nearly or quite parallel with the plane of the wheel; the inclination of that part of the lower surface of the upper rim of the wheel which is next to the gate, being the same or nearly the same as that of

the lower surface of the gate next the upper rim, and the change from inclining to horizontal being gradual, as by a curve, or making the upper surface of the disk next the lower rim of the wheel to incline up towards this rim, and making the lower sides of the parts of the passages through the wheel which are next the disk ascending or inclining to the plane of the wheel, so that the stream will gradually diminish in height at the entrance or entrances into the wheel, so that the water which passes in the upper parts of the stream or streams will converge towards that which passes in the lower parts of the streams before striking the floats; and continuing this converging into the wheel to about one-half the distance from the inner to the outer edges of the rims of the wheels. Also, the forming of the lower part of the tube which sustains the disk, and the forming of the top of the disk on that part of it next the tube, and fastening these parts together.

No. 10,026.—URIAH A. BOYDEN, of Boston, Mass.—*Improvement in Turbines.*—Patented September 20th, 1853.

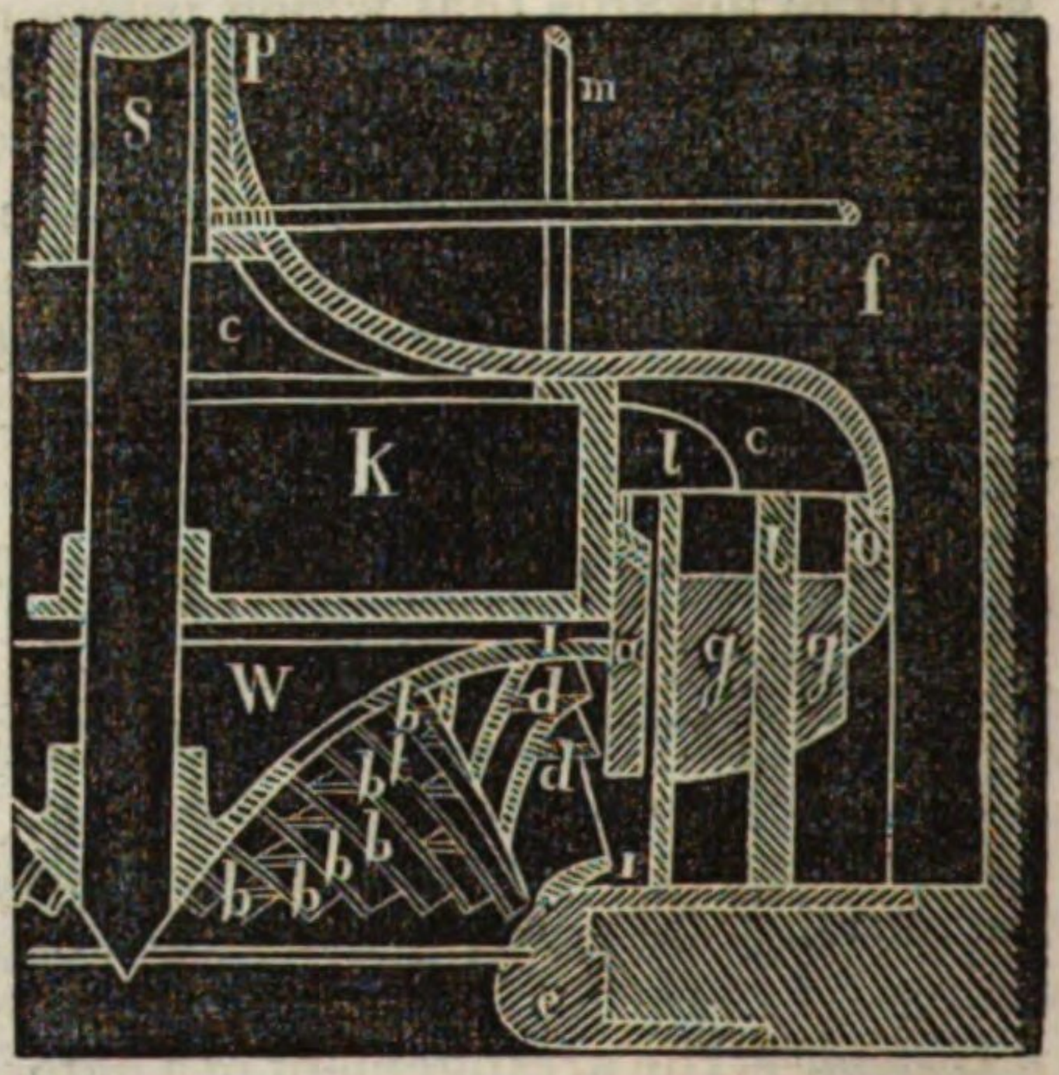


w, water-wheel, and *i*, its lower rim; *r*, upper rim; *b b*, buckets; *d d*, diaphragms; *l l*, leading curves; *a*, annular gate; *m*, one of three rods for moving the gate; *g*, garniture or lining.

Claim.—The arrangement of a gate at the entrance of the water into the wheel, with a part or all of the garniture or lining, and other parts of the turbine within, over, and about the gate, such that the gate and a part of the garniture, if any be attached to the gate, may move freely, while the part of the garniture not attached to the gate, and other parts over and about it, remain stationary; and so closely fitted that little or none of the water in the flume can run to the upper part of the gate, except by passing under the stationary garniture, and afterwards upward so as to diminish the liability of sediment being carried by the water to the upper part of the gate or movable part of the garniture, if any be attached to the gate, so as to obstruct the motion of the gate or movable part of the garniture. Also, the leaning or inclining of the floats of buckets of turbines to the rims of the wheels, so that the leaning of the floats will diminish the spreading or deflecting of the streams into the parts of the wheel opposite the gate. Also, the arrangement of the diaphragms or partitions in reacting wheels, and in the wheels of turbines, at different distances from the rims of the wheels in the several spaces between the floats, to facilitate regulating the motions of the wheels. Also, the combination of the device of making the gate at the entrance of the water into the wheel to move separately from the garniture, with leaning the guides or leading-curves which direct the water into the wheel; so that when

the gate is partially open, the part of the water which passes by or near the surface of the gate in flowing towards this passage into the wheel made by such partial opening of the gate, has its motion directed the way the wheel turns, in consequence of the leaning of the guides.

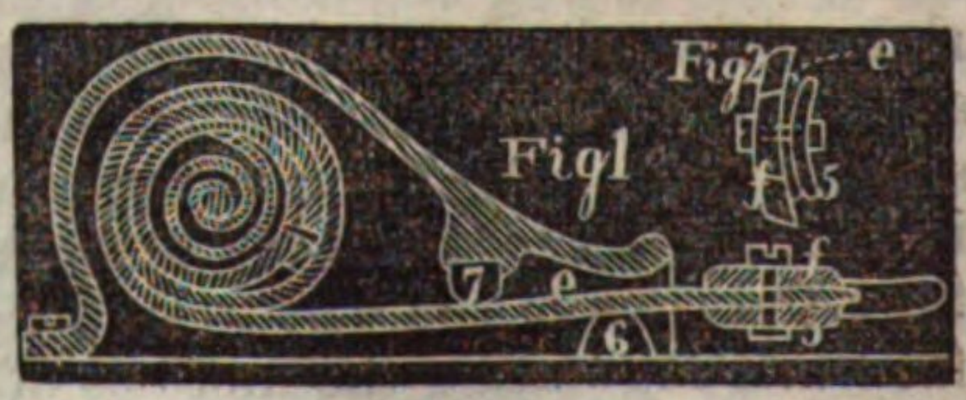
No. 10,027.—Uriah A. Boyden, of Boston, Mass.—*Improvement in Hydraulic Motors.*—Patented September 20th, 1853.



Shaft *s* of this turbine is suspended. The same letters refer to the same parts in this figure as in the preceding figures.

Claim.—The arrangement of the gates around and next outside of the peripheries of the water-wheels between the wheels and the guides, which causes the water to move obliquely towards the wheels in the way the wheels turn when the water first strikes the floats or buckets. Also, the device to cause the height of the wheel, or the position of the parts which partially confine the water which presses the wheel upward to vary as the height of the water or fall varies, so that the width of the aperture which lets the water escape from the place where it presses the wheel upward varies proportionably to the quantities of water pressed into it; so that the force with which the water presses the wheel upwards will be nearly or quite constant, though the height of the fall varies greatly. Also, the combination of a gate around and near the periphery of a water-wheel between the wheel and the guides, or other things which direct the water the way in which the wheels turn into the wheels, with the parts of the floats near the gate covered, so that the water will strike their concave sides. Also, the shape of the spaces between the rims of water-wheels which the floats are fastened to, in which they flare towards the axes of the wheels.

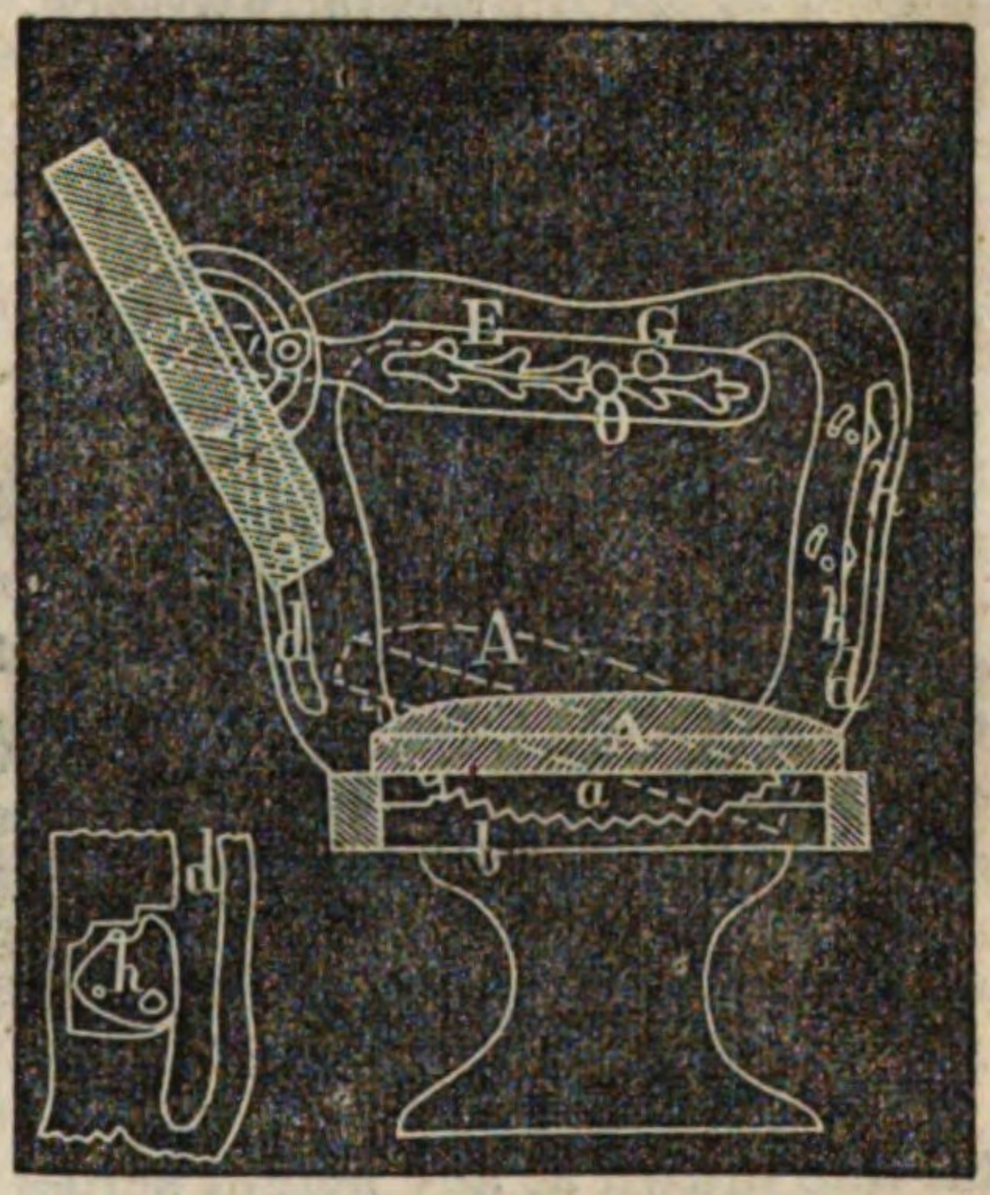
No. 10,028.—Alfred F. Chatman, of New York, N. Y.—*Improvement in Razor-Strops.*—Patented September 20th, 1853.



This improvement is designed to renovate and elevate the centre of the strop *e* as aften as it is pulled out, by its coming in contact with a piece of soft metal 7 (fig. 1); and also to hold the razor evenly or accurately by means of a concave end-piece *f*, and a convex piece 6. The machine is fastened to the edge of a table when in use by means of the screw *s*. Fig. 2 is a front view of the end-piece *f*.

Claim.—The metallic renovator, in combination with the spring-barrel, or its equivalent, to operate on the strop *e*. Also, the convex end *f*, and rest 6, to elevate the centre of the strop, as described and shown.

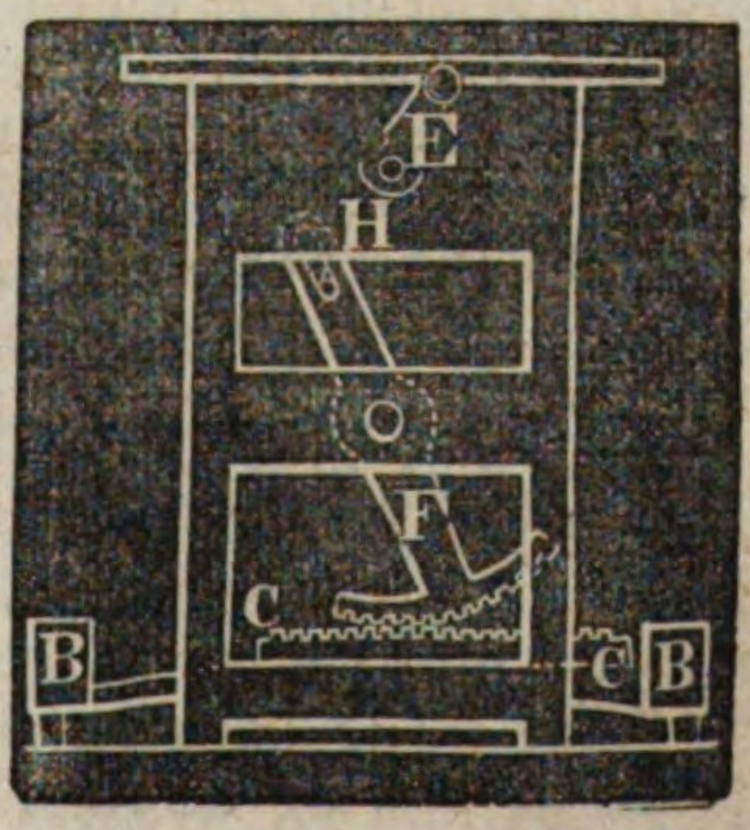
No. 10,029.—Isaac Fay, of Cambridgeport, Mass.—*Improvement in Railroad Car-Seats.*—Patented September 20th, 1853.



G is a pin; O, sliding-bolt; A′ is one of the positions to which the seat may be changed.

Claim.—The combination of the groove *d*, and one or more dogs *h*, as applied thereto, and made to operate for the support of the back, and to enable it to be elevated, or its supporting pin raised out of the groove *d*, as described in specification. Also, in combination with the inclined notches, and long slot of each bar E or F, the sliding-bolt, or slide O, as applied thereto. Also, the convex and concave toothed racks *a* and *b*, in combination with the seat and the chair-frame; the same being for the purpose of enabling the seat to be set with such inclination, either forward or backward, as may be conducive to the ease and comfort of the person sitting thereon, whether the person be in an upright or recumbent position.

No. 10,030.—David Freed, of Huntingdon, Pa.—*Improvement in Toilet Furniture.*—Patented September 20th, 1853.

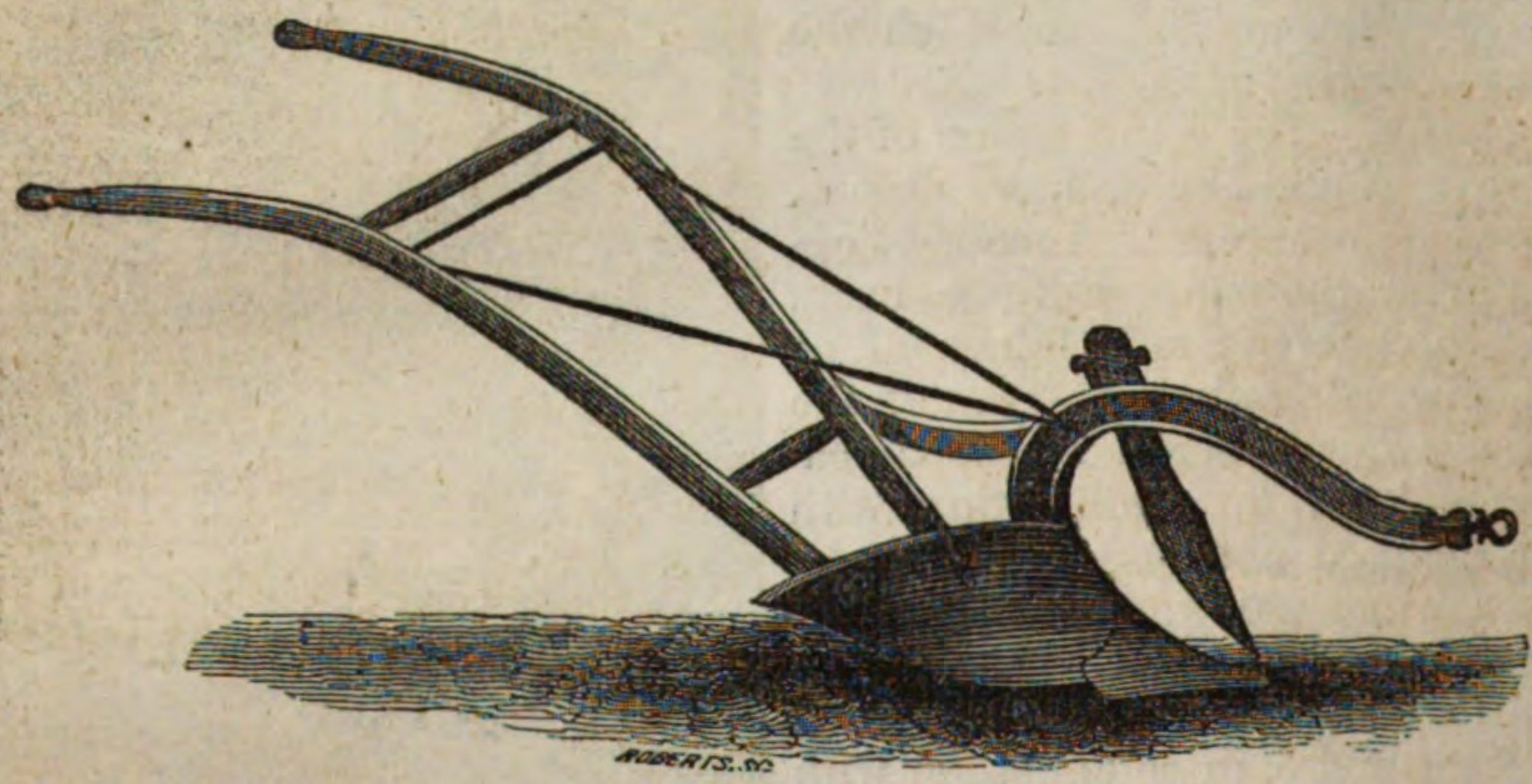


This invention consists in attaching to a piece of furniture an apparatus, by means of which pantaloons may be drawn off without stooping or sitting down.

Claim.—The attaching or combining with a wash-stand, or other toilet or chamber-furniture, the brackets B and bolt C, when the bolt is thrown against the brackets by means of a crank or knob E, at or underneath the top of the stand through the levers H F, or their equivalents, in the manner and for the purpose herein set forth.

No. 10,031.—Samuel Hulbert, of Ogdensburgh, N. Y.—*Improvement in Ploughs.*—Patented Sept. 20th, 1853.

This plough is constructed with a convex mould-board from front to rear, and from top to bottom, uniformly; so that a concave arc of a circle, when applied to the mould-board horizontally, will fit in every part, and a concave arc, when applied vertically to the line at the base, shall also adapt itself to every part of the mould-board, which is so curved as to turn the furrow-slice.

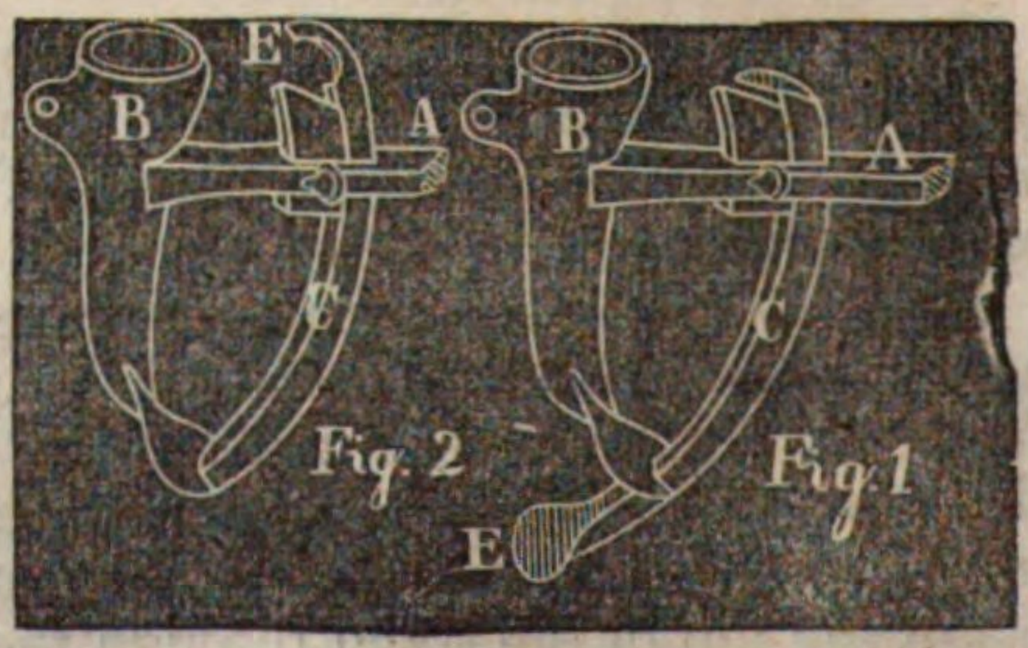


Claim.—Constructing a mould-board of a plough, so that a horizontal line drawn at any height across its working side, shall describe the convex arc of a given circle, and any line drawn across its working side at right angles to its base, shall also describe the convex arc of a circle, substantially as set forth.

No. 10,032.—Samuel Jenkins, of Portsmouth, Pa.—*Improvement in Seed-Planters.*—Patented Sept. 20th, 1853.

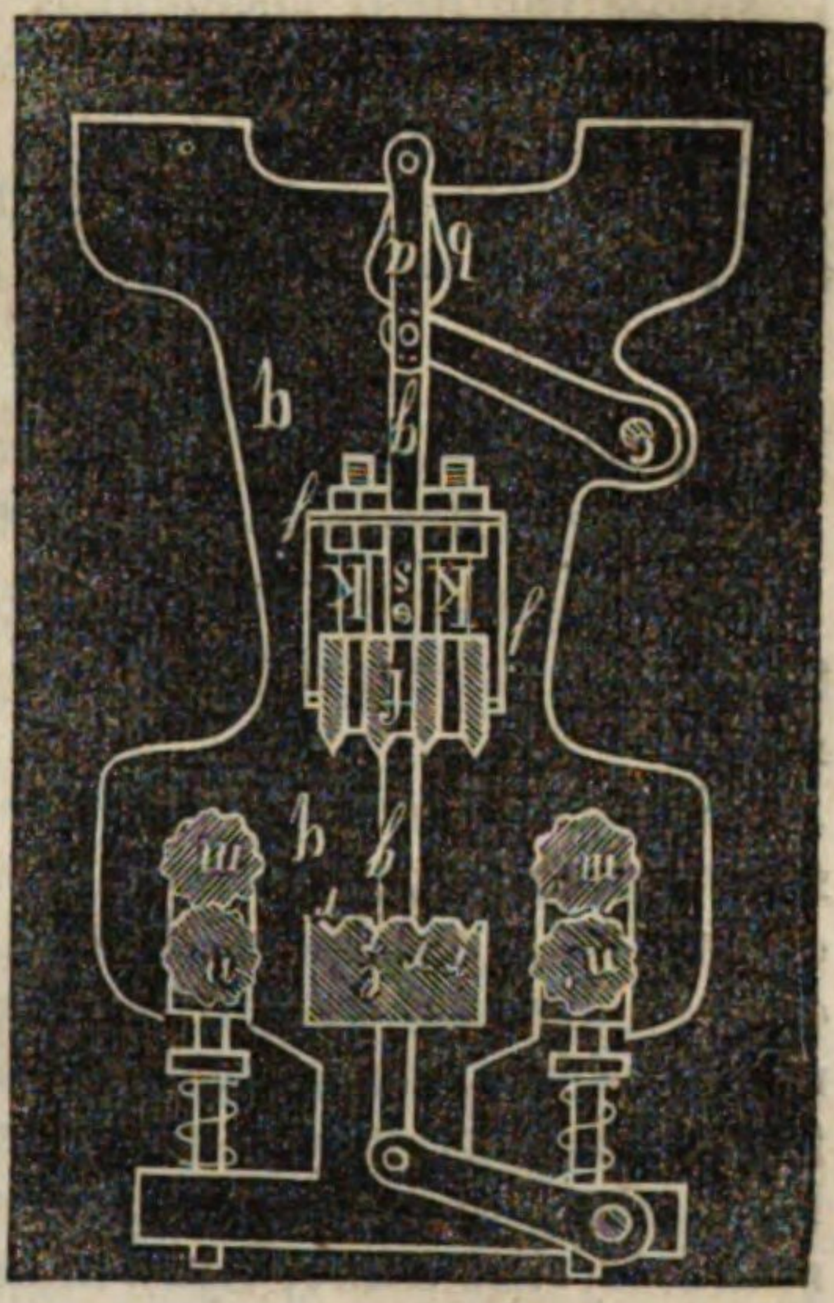
c is a steel cutter, which is adjustable, for the purpose of regulating the depth of tooth or tube B; E, runner; A, drag-bar attached to the front part of the frame.

Fig. 1, position of cutter when necessary to regulate the depth in soft soil, and pass over any obstructions. Fig. 2, position of the cutter when necessary to pass over any obstructions in hard soil.



Claim.—The peculiar shape and construction of the adjustable cutter, its passing through the drag-bar, and fitting in a dovetail in the point of the shovel; all in combination as herein described, for the purpose of allowing the tooth to pass easily over any obstructions, and especially to regulate the depth of furrow.

No. 10,033.—Oliver S. Leavitt, of Marcellus, N. Y.—*Improved Hemp-Breaker.*—Patented Sept. 20th, 1853.



q, frame; *a*, driving-shaft, with cranks *b*, which carry the upright pieces *g g* up and down; to these pieces the spring *j j* is bolted (*s*, bolt); and to this spring the beater is attached by bolts *k*; *e*, beam, made fast on frame *q*, in the grooves *r r*, into which the beater *f* presses the hemp; *c*, rock-shaft; *n' m'* and *n m*, fluted-rollers for the purpose of passing the hemp under the piece *e*.

The beater is composed of a number of blades, made to strike rapidly into the grooves of the fluted beam.

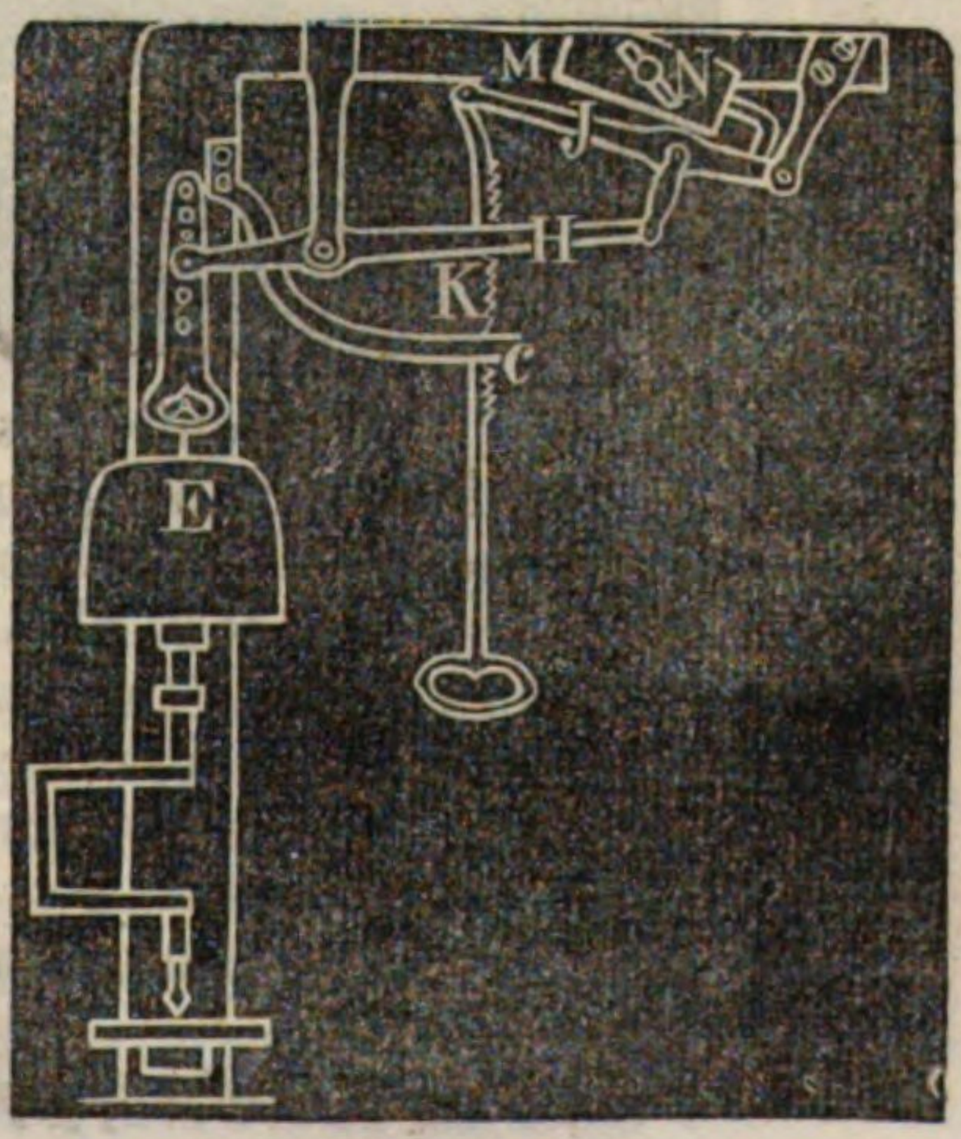
Claim.—The combination of a reciprocating beater with parallel blades, set at decreasing distances from each other, with a fixed bar, fluted or serrated, to correspond with the blades and spaces of the beater.

No. 10,034.—Oliver S. Leavitt, of Marcellus, N. Y.—*Improvement in Drawing-Frames for Hemp and Flax.*—Patented Sept. 20th, 1853.

The object of this invention is to introduce the material in an advantageous manner to the machine.

Claim.—The peculiar form of the gill-bar, in combination with the rocking-lever *m*, the dog *i*, and the cam or tappet *j*, for the purpose of withdrawing the gill-pins from the material, and directing the bar's backward movement. Also, the device by which the rods are pressed down, for the purpose of making the gill-pins penetrate effectually the material to be drawn, being operated by the lever, in the manner specified.

No. 10,035.—Warren Lyon, of New York, N. Y.—*Improvement in Drilling and Counter-sinking Machines.*—Patented Sept. 20th, 1853.

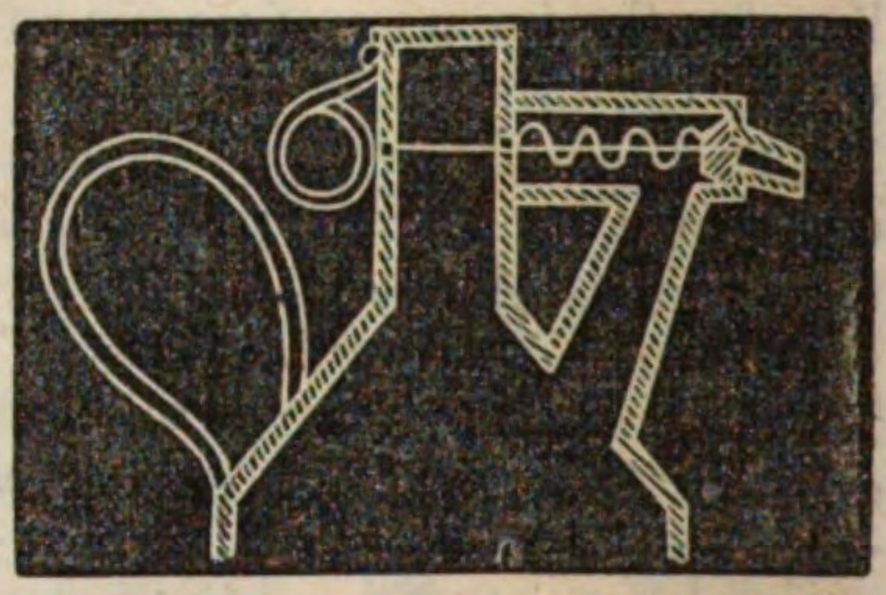


The nature of this invention consists in having a weight attached to the arbor of the drill, for the purpose of giving the requisite pressure; and in having a system of levers and a counterpoise connected to the upper part of the arbor, for the purpose of elevating the arbor and graduating the pressure which is given the drill by the weight upon the arbor. When it is necessary

to withdraw the drill from the hole, the rack-bar K is drawn downward, and the rack is made to catch into the side of the recess *c*, thereby keeping the drill suspended. The pressure of E can be changed by adjusting counterpoise N, on rod M.

Claim.—The combination of the weight E, levers H J, and counterpoise N, constructed, arranged, and operating in the manner and for the purposes substantially as herein described and shown.

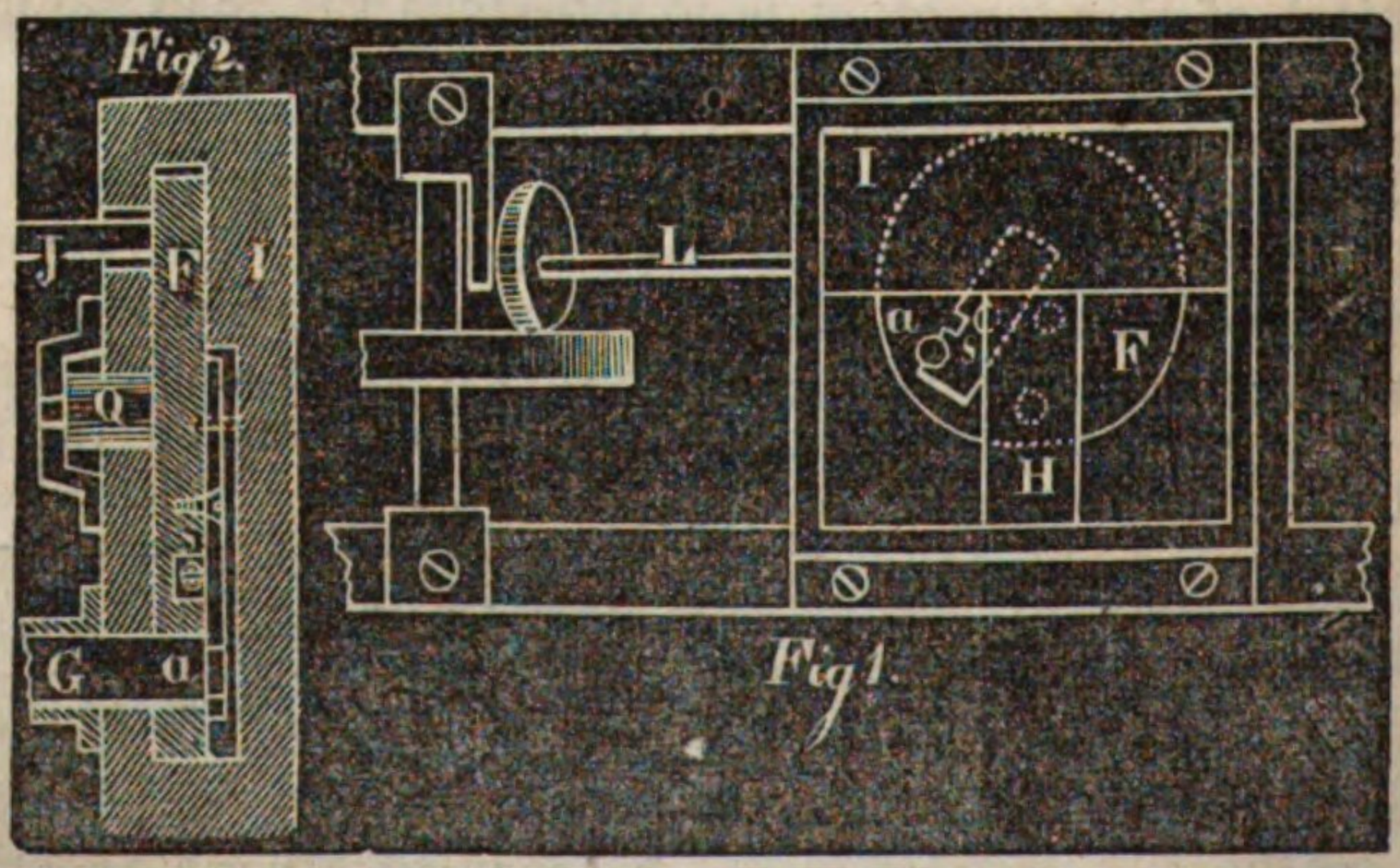
No. 10,036.—James R. Nichols, of Haverhill, Mass.—*Improvement in Lamp-Feeders.*—Patented Sept. 20th, 1853.



By reference to the annexed figure the claim will explain this improvement.

Claim.—The application to the ordinary decanting vessel of a spring valve or valves, easily and conveniently opened by the thumb or finger while replenishing lamps, or decanting therefrom, whether said spring and valves be made and arranged in the manner as shown, or other mode substantially the same, by which similar results shall be produced.

No. 10,037.—Henry Perrin and William Rudduck, of Wilmington, Ohio.—*Improvement in Seed-Planters.*—Patented Sept. 20th, 1853.



The object of this invention is to effect, in a simple and certain manner, uniformity in planting, and to prevent the clogging of the seed from obstructing the discharge, and otherwise improve the distributing mechanism of seed-planters.

Fig. 1 is a top view, and fig. 2 a section through the centre of F, on a larger scale. F is an oscillating disk-valve, turning on a centre pivot Q; F is perforated with an aperture *a* to receive seeds or kernels, one at a time; G, receiving-tube; F is vibrated by means of a pin J sliding in an endless groove, which runs obliquely round a cylinder on the end of axis L.

Claim.—The method of supplying the distributing-tube with grain

or seed from the hopper, by means of the reciprocating or vibratory valve F in the hopper, in combination with the cap H, and the discharging plate S, and receiving chamber G.

No. 10,038.—PHILO SYLLA and AUGUSTUS ADAMS, of Elgin, Ill.—*Improvements in Grain and Grass Harvesters.*—Patented Sept. 20th, 1853.

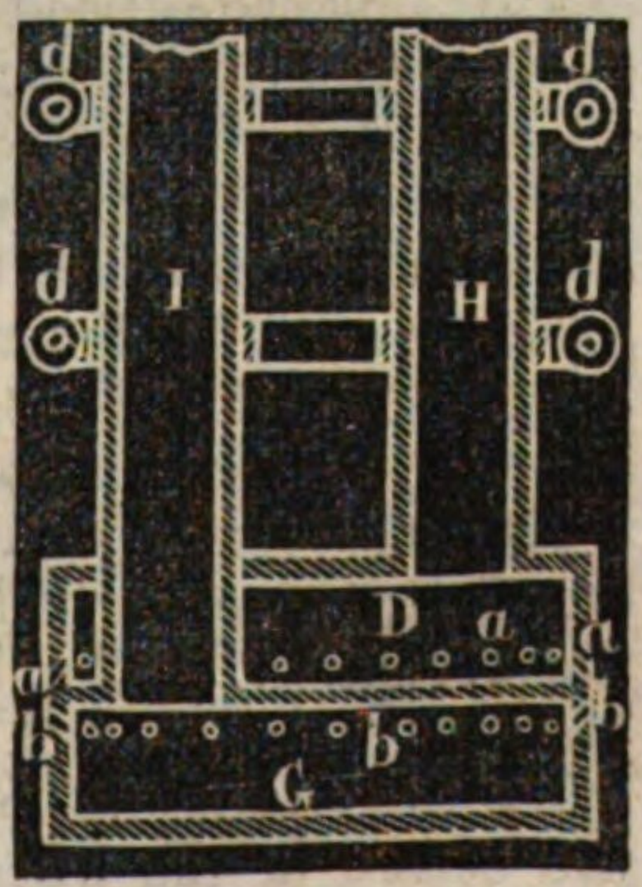
This machine is constructed with suitable and convenient platforms, to enable the binders, as well as raker, to remain upon the machine during its progress, when in use, and bind the cut grain thereon; there is also attached to the machine a box to receive the sheaves, which box may, by means of the mechanism, be easily upset, and thus the machine carries the grain together to be shocked.

Claim.—The weighted levers, or their equivalents, which carry the sickle-bar and sickle, and allow them to vibrate perpendicularly, and accommodate the sickle to uneven ground in cutting grass, which levers may be made permanent when cutting grain. Also the link or hinged brace, in combination with the weighted levers, which brace prevents the sickle-bar from being traversed longitudinally by the action of the sickle, but allows it to vibrate perpendicularly, and accommodate itself to uneven ground. Also, the stands of the binders, constructed so as to allow them to stand so much lower than the horizontal platform, that they can bind the gavels into sheaves with greater facility, far less labor, and much faster than by any of the modes heretofore practised.

No. 10,039.—ANCIL STICKNEY, of Norwich, Vt.—*Blow-Pipes for Enlarging Blasting Cavities.*—Patented Sept. 20th, 1853.

Claim.—An improved process of enlarging the drill-hole by means of an air-blast and charcoal, or other combustible fuel placed in the hole; the same consisting in the employment of a blast-tube made with lateral perforations, and a closed or nearly closed bottom.

No. 10,040.—ANCIL STICKNEY, of Norwich, Vt.—*Improvement in Blow-Pipes for Enlarging Blasting Cavities.*—Patented Sept. 20th, 1853.

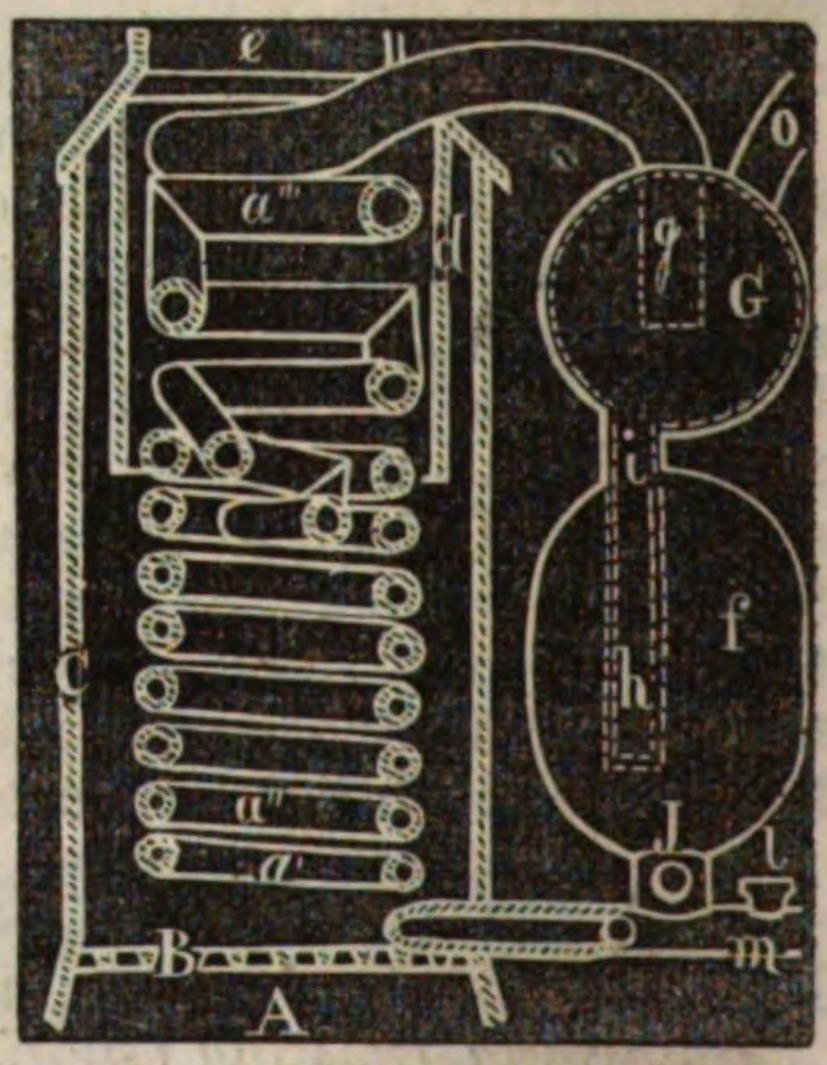


The object of this invention is to enlarge the lower portion of the drill-hole, in rocks, so as to afford sufficient space to contain the charge of blasting powder. The rock is decomposed by means of an extreme degree of heat, produced by the employment of a cylindrical box of less diameter than the drill-hole, partitioned into two chambers, D and G (see fig.); hydrogen gas is forced down one of the pipes H I and oxygen down the other, into chambers D and G, and out of the orifices *a* and *b*.

When inflamed, the gases will burn with intense heat, and decompose part of the rock. *d d* are guide friction-rollers.

Claim.—The instrument for enlarging the drill-hole, by the employment of gases, viz.: the two chambers, the perforations or orifices *a a*, *b b*, &c., and supply-tubes H I, as arranged, for commingling the gases and disseminating flame therefrom, entirely around and against the sides of the drill-hole, whereby the drill-hole is speedily enlarged for a suitable charge chamber.

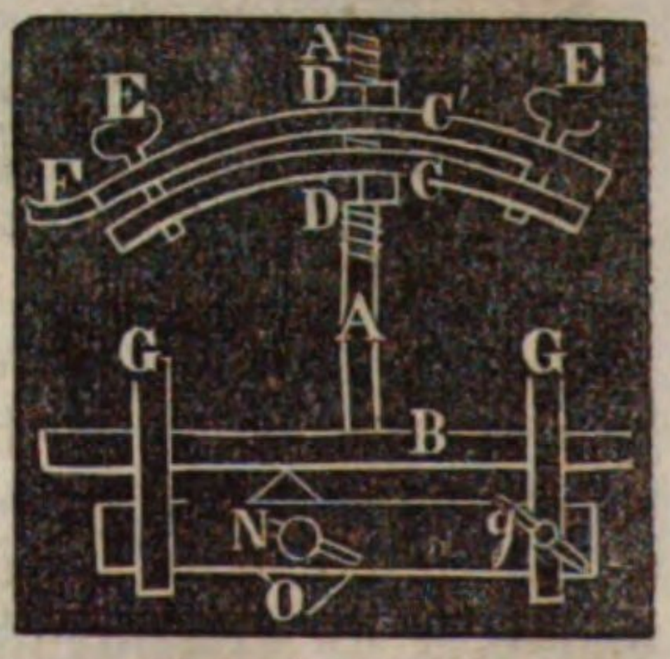
No. 10,041.—ABEL SHAWK, of Cincinnati, Ohio.—*Improvement in Steam-Generators.*—Patented Sept. 20th, 1853.



The nature of this invention consists in a tubular generator *a' a'' a'''*, which extends gradually from *a'* up to *a'''*, and has a forced circulation, and which, while it lines the fire-box, and is expanded in its diameter from above the fire-box to its termination, is connected to a steam chamber, or receiver outside of or exterior to it. c is the outside jacket; *d*, inside jacket; *e*, chimney; *f*, air vessel; G, steam chamber; *g*, end of the generator; *h*, blow-off pipe; *i*, cock in blow-off pipe; J, cock in supply pipe; *l*, safety valve; *m*, supply pipe; *o*, steam pipe from steam receiver.

Claim.—A tubular generator which has a forced circulation, and is arranged and operates as above described and shown.

No. 10,042.—OSCAR WILLIS, of McDowell County, N. C.—*Improvement in Saws for Inserting Iron Buckets in Water-Wheels.*—Patented Sept. 20th, 1853.

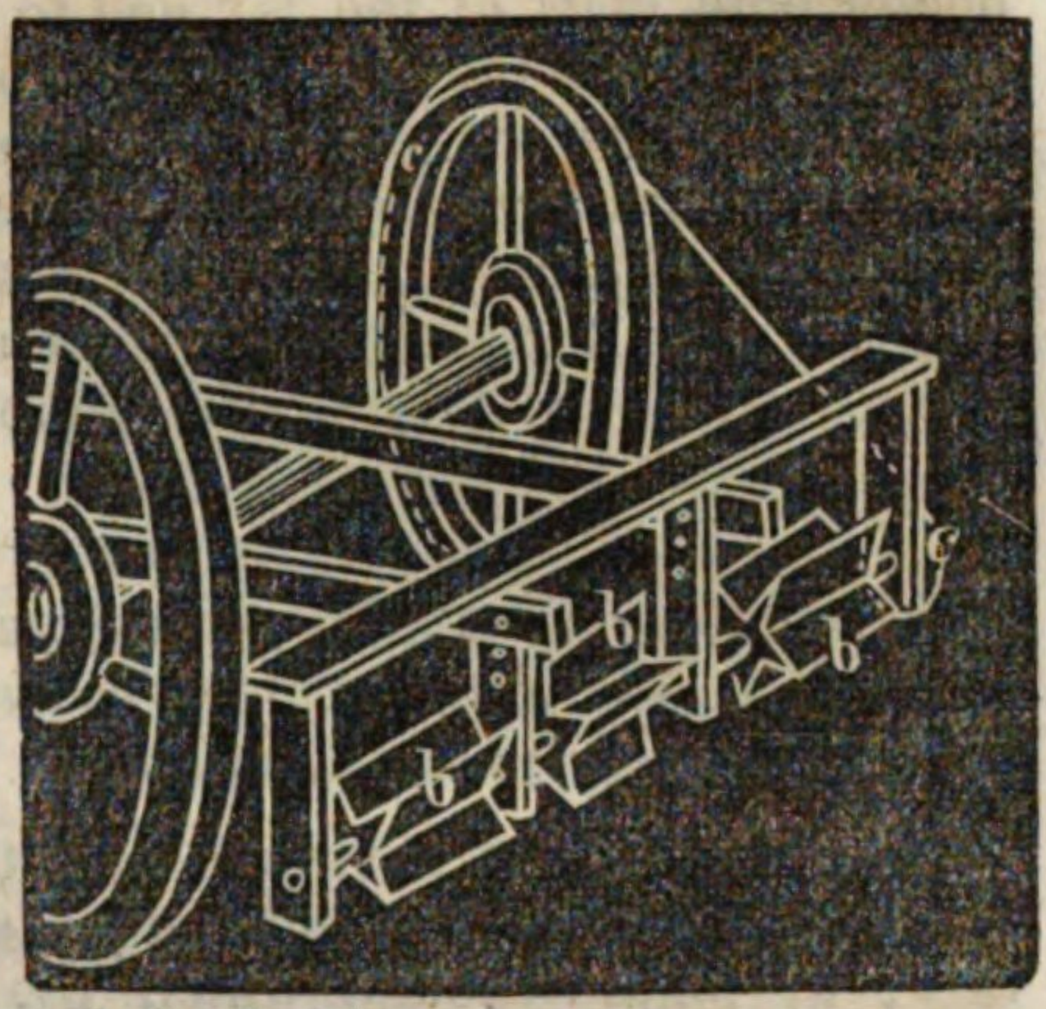


This saw is designed for cutting the grooves, for inserting iron buckets in wooden waterwheels.

C C are circling pieces of iron, with the two-edged saw fastened between them, by the screws E E. The distance of the saw from the centre of motion is regulated by the two nuts D D. F is the handle to work the saw.

Claim.—An adjustable apparatus for sawing out the grooves or fillets in water-wheels, for the reception of the buckets, composed of a two-edged saw, sprung between clamps, and connected by a screw-rod A to a sliding-bar B, when the sliding-bar is made adjustable upon a radius arm O, hung to the centre of the wheel. The whole being combined and operating as set forth.

No. 10,043.—GEORGE GORMAN, of Lamar, Miss.—*Improvement in Cotton-Stalk Cutters.*—Patented Sept. 20th, 1853.



(By reference to the figure the claim will explain this machine.)

Claim.—The construction and arrangement of the machine, consisting of rotary whippers or reels *b b*, on a bar supported in a frame admitting of elevation and depression; the whippers being driven by band-wheels *c*, on one or both supporting wheels of the machine, for the purpose of effectually reducing the stalks of cotton, and thus rendering them useful as a manure, and in a condition to offer no obstructions to the plough in the after cultivation of the land.

No. 10,044.—HALVOR HALVORSON, of Hartford, Conn.—*Improvement in Looms for Weaving Hair-Cloth.*—Patented Sept. 27th, 1853.

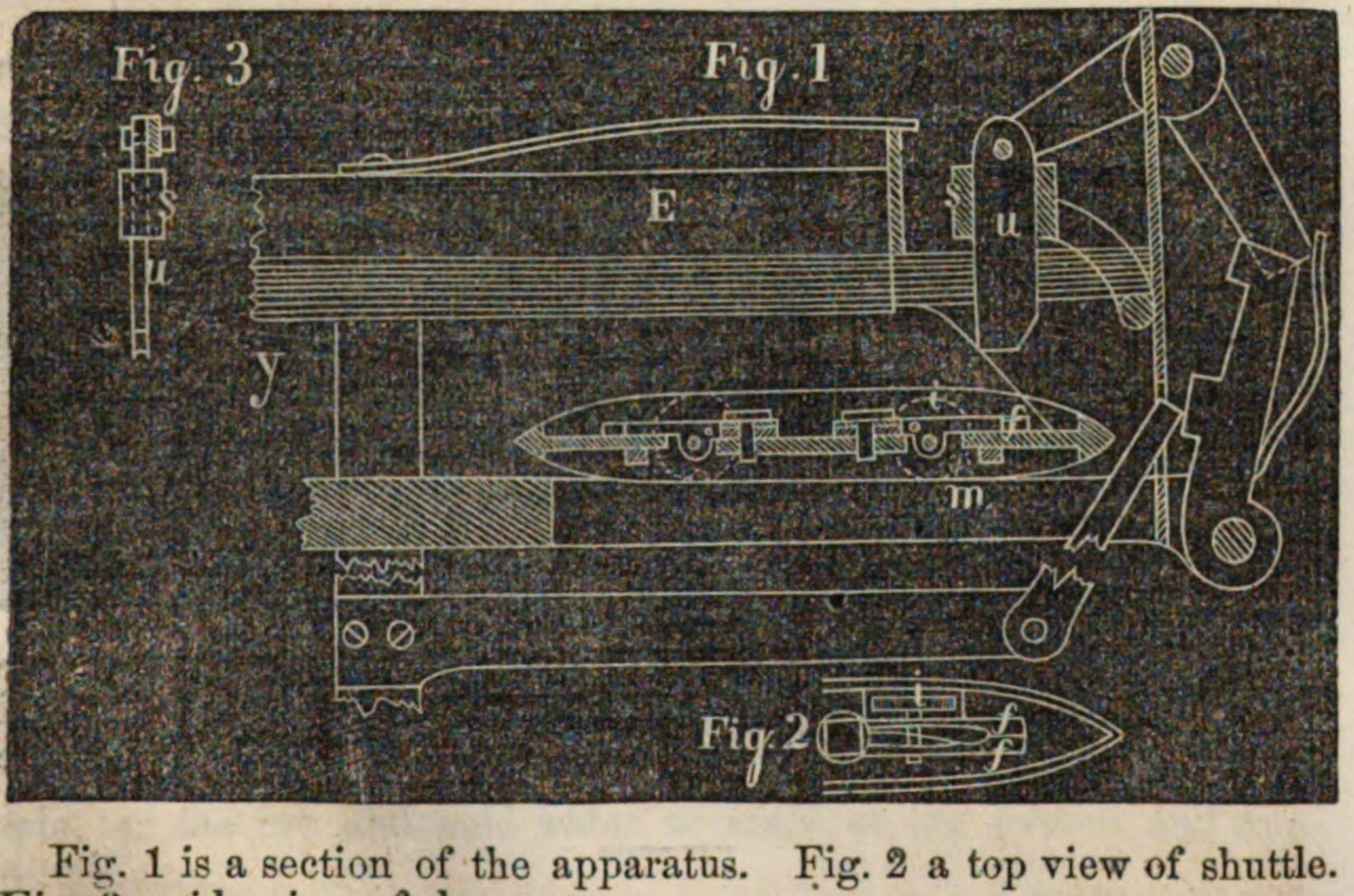
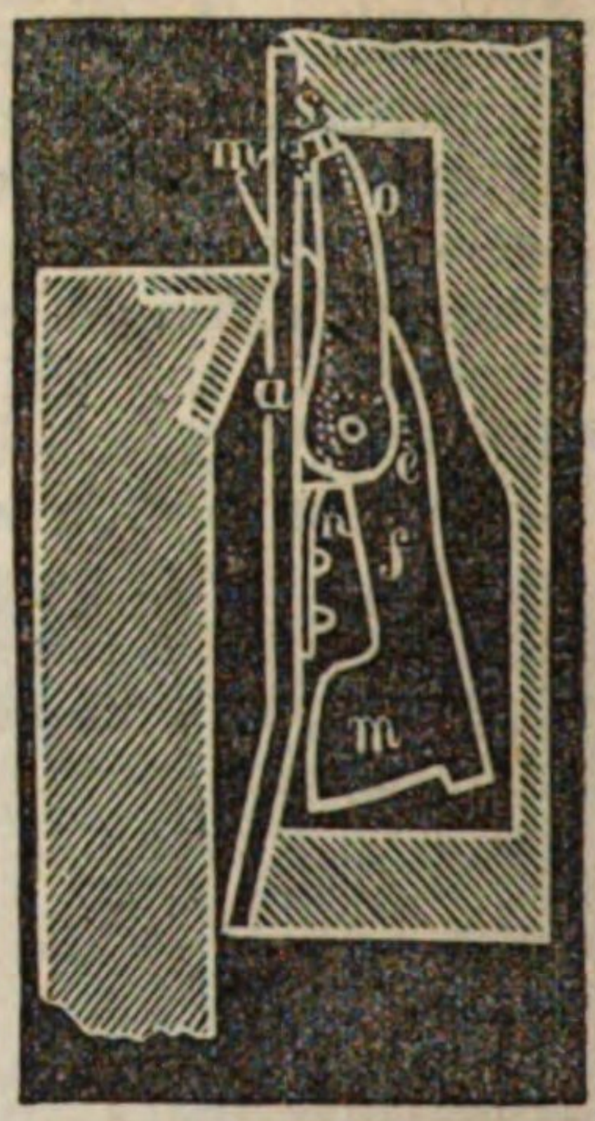


Fig. 1 is a section of the apparatus. Fig. 2 a top view of shuttle. Fig. 3 a side view of depresser.

y, cloth-making part of the apparatus; E, trough; *f f*, pair of pincers; *u*, depresser, which has on its lower end a groove just large enough to catch one hair; the hair is caught by the pincers, which are at the same time screwed together, by the screw-head *i* striking against the projection *m*. After that, the shuttle returns to the other end of the table, and there catches another hair, and so on.

Claim.—The combination of the trough or troughs, one or two de-

pressers, one or two sets of pincers applied to the shuttle, and mechanism for opening and closing the pincers; the whole being applied to one or both ends of the lay and to the shuttle, and made to operate together, for the purpose of carrying the hairs into the shed of warps. Also, the arrangement of one or both troughs with respect to the depresser or depressers, and to the shuttle boxes and the lay; the trough in such arrangement being made to extend from the depresser towards the middle of the lay.

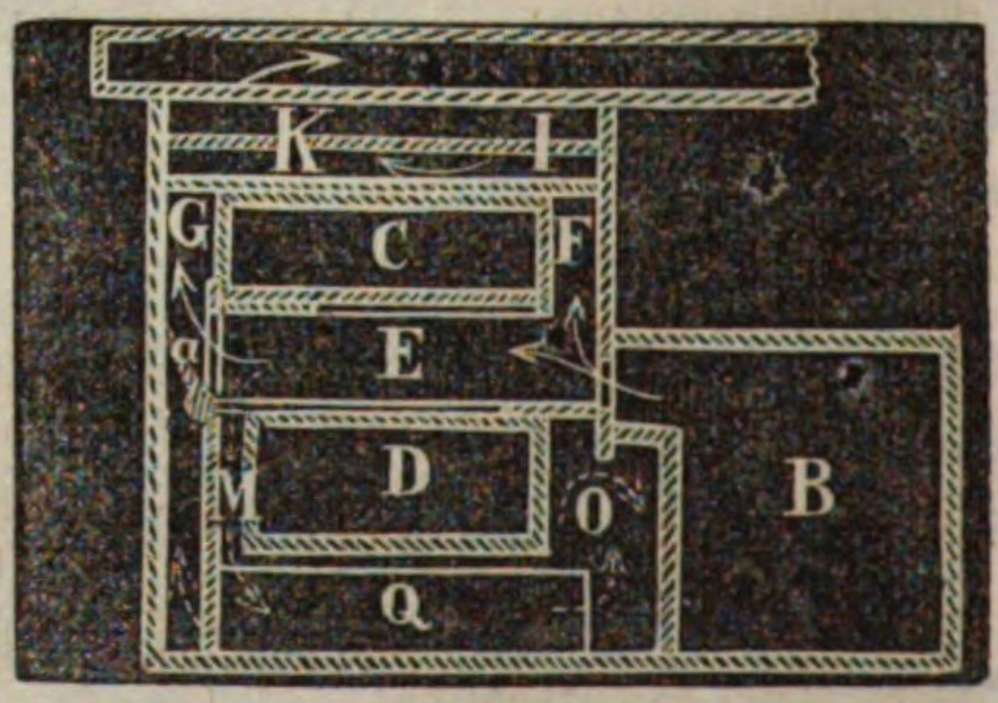


No. 10,045.—Henry Hochstrasser, of Philadelphia, Pa.—*Improvement in Sash Fasteners.*—Patented Sept. 27th, 1853.

m m, catches; *o*, a spring detent secured to one of the lugs *e*; *f*, catch-bar; *s*, stump or recess; *a*, plate through which the catch protrudes; *n*, spring.

Claim.—The self-acting catch, made and operating substantially as herein described and shown in figure.

No. 10,046.—Nicholas Mason, of Roxbury, Mass.—*Improvement in Cooking Ranges.*—Patented Sept. 27th, 1853.



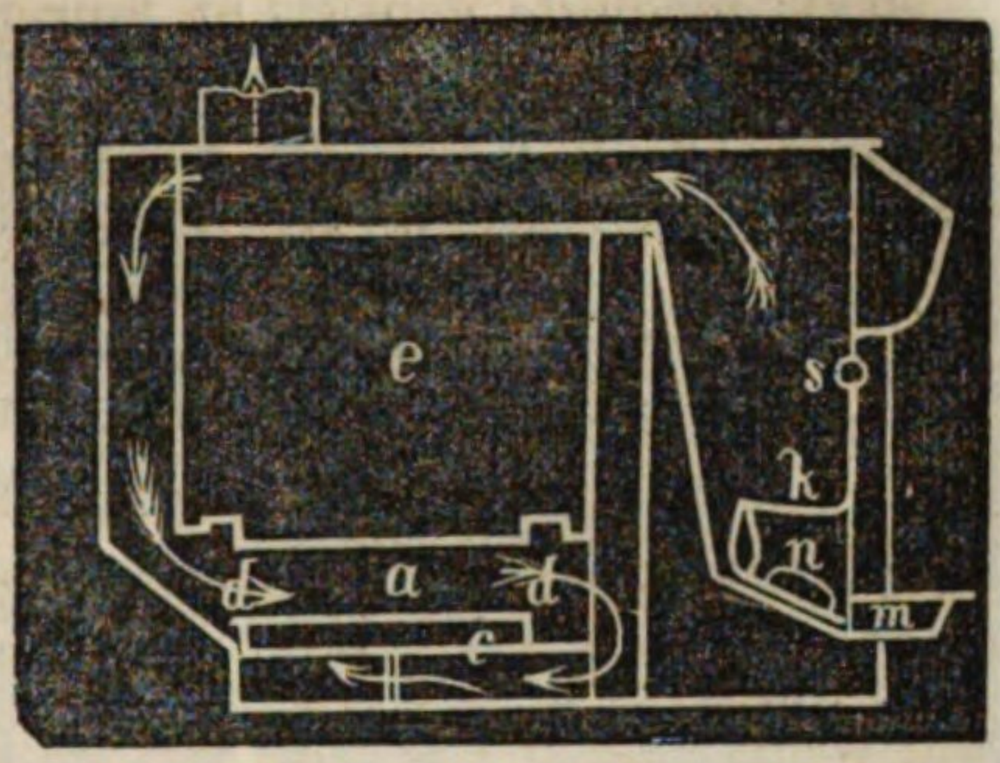
B, fire-box; C, upper oven; *a*, damper. When but one oven is to be used, *a* is opened as seen in fig. The heat fills F, and passes through E G to a flue in the rear of C, thence to I, and round a partition to K, and thence escapes through the upper flues. When both ovens are to be used, *a* is shut, and the heat passes through M, round Q into the space O, thence through Q into flue G.

Claim.—The employment of two ovens, in combination with the peculiar arrangement of the flues around their top, bottom, back, and sides, by which five sides of either one or both may be heated at the same time.

No. 10,047.—Henry McCarty, of Pittsburg, Pa.—*Improvement in the Manufacture of Sheet-Iron.*—Patented Sept. 27th, 1853.

Claim.—Imparting to the surface of sheet-iron the peculiar mottled appearance of Russia sheet-iron, by passing the sheet between a pair of planished or hammer-dressed rollers.

No. 10,048.—JORDAN L. MOTT, of New York, N. Y.—*Improvement in Cooking Stoves and Ranges.*—Patented Sept. 27th, 1853.

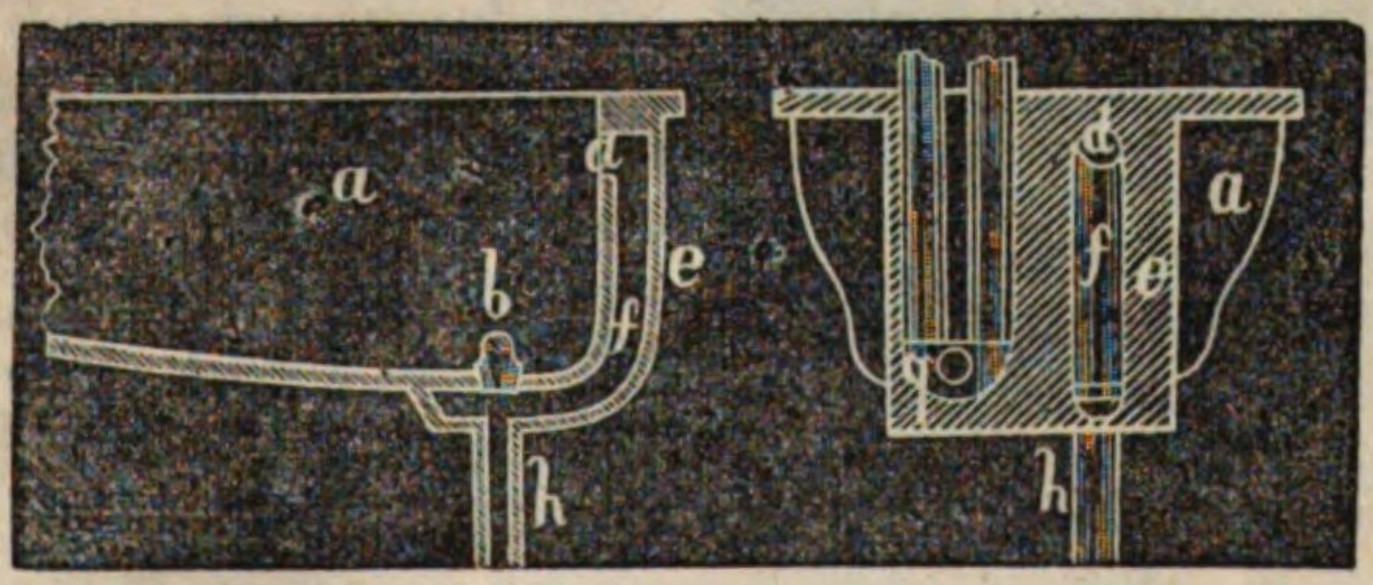


a, series of bottom flues or tubes, with small spaces left open between each two of them; these flues are held together by end plates *d d*, and are removable through the oven door *e*; *c*, top plate of bottom flue *f*; *m*, ash-pan; *k*, grate; *s*, journals on which grate *k* turns; *n* upright arm of lever.

Claim.—Connecting the top plate of the bottom flue with the lower part of the series of flue-tubes, so that in taking out the series of flue-tubes for cleaning, the top plate of the bottom flue shall be removed at the same time, and thereby expose to view the lower flue space, greatly facilitating the operation of cleaning. Also, the combination of the swinging grate with the self-acting weighted latch *n*, connected with the plate below the grate, whereby the contents of the grate can be readily discharged, and the grate readjusted, by a slight use of a poker.

No. 10,049.—JORDAN L. MOTT, of New York, N. Y.—*Improvement in Bathing-Tubs.*—Patented September 27th, 1853.

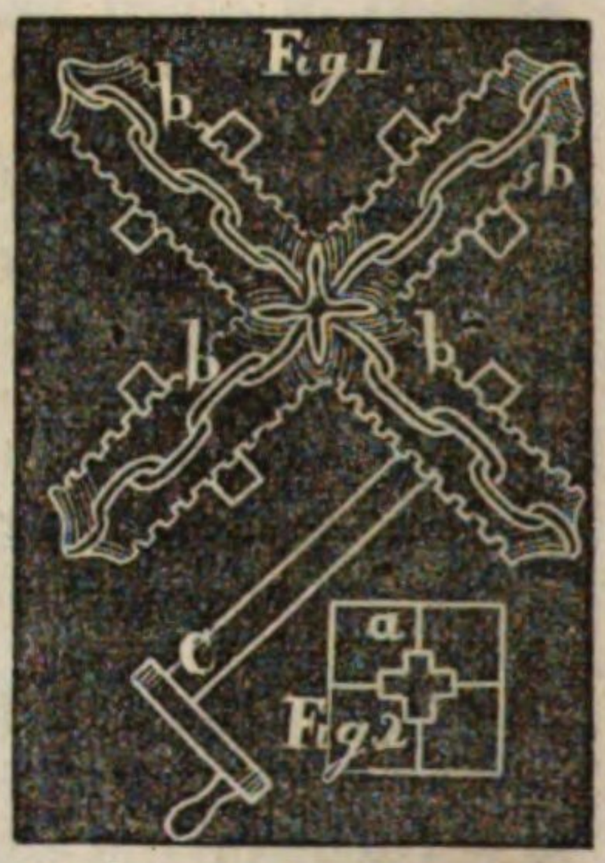
a is the tub, with a waste-hole *b*, and waste-pipe *h*; *d*, overflow-hole; *f*, channel connecting the overflow and waste-hole; *g*, supply-



hole, for the hot and cold water to enter at the bottom and commingle.

Claim.—The mode of combining with a bathing-tub either one or both of the channel-ways, and making, when constructed, part of the tub; one of which channel-ways connects the overflow and the waste-holes with the waste pipe, and the other is adapted to the insertion of the hot and cold water pipes, and discharging the hot and cold water together, at or near the bottom of the tub, and in a horizontal position.

No. 10,050.—Christian Sleppy, of Newport, Pa.—*Improvement in Machines for making Chains.*—Patented September 27th, 1853.



This machine consists of four rollers, having cogs, by which they are propelled. On the edge of each roller are steel dies, with sharp edges, corresponding to the size of the chain to be forged. The dies converge to a point, and, in passing each other, make the chain.

The red-hot bar first passes through guide *a* (see fig. 2), and then comes between the four cog-wheels *b b b b* (fig. 1).

Claim.—The forging and making chains out of a solid bar, without the welding process, which is done instantly as the bar passes through between the four rollers, which mould the links into form; and of any size desired, and of any metal.

No. 10,051.—David Stuart, of Philadelphia, Pa.—*Improved Mode of Annealing Hollow Iron-ware.*—Patented September 27th, 1853.

The nature of this invention consists in covering the inside of iron hollow ware with a paste made of a composition to exclude the air, and which resists the influence of the heat; when the hollow ware is properly prepared in this manner, it is placed in the oven and heated to a cherry-red, which takes the chill out of the surface, and renders it so soft that it can be turned bright in a turning lathe, or by other means. The composition may be soapstone-dust and carbon; the more carbon in the mixture, the better. These ingredients are mixed with water, to about the thickness of thick cream, and with it the inside of the article is to be completely covered. The heating takes from twenty to thirty minutes.

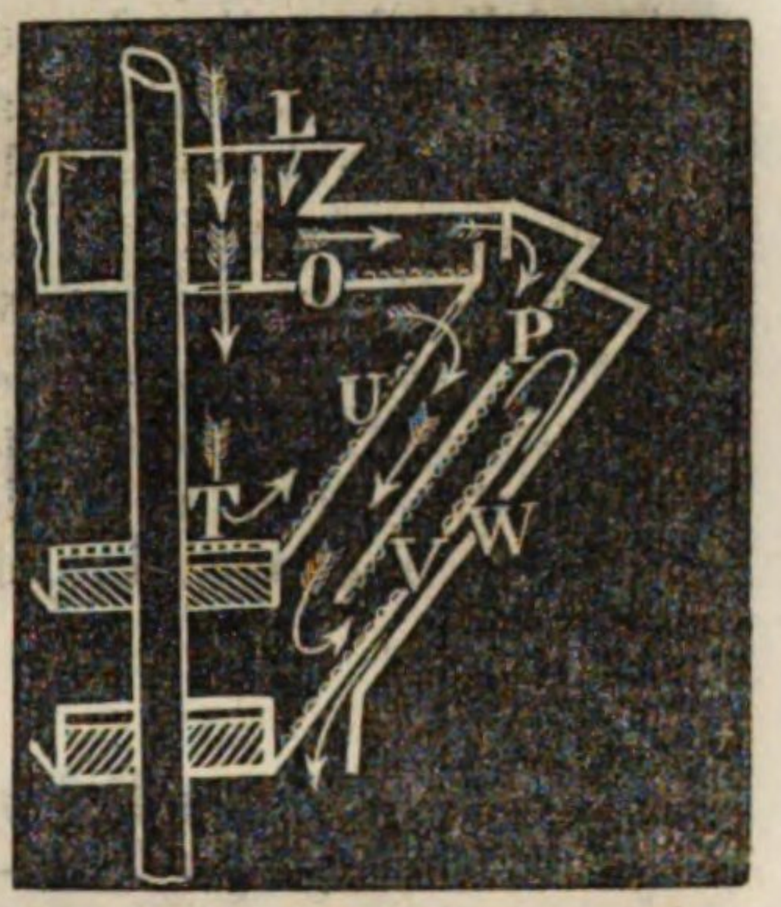
Claim.—The above process, consisting in coating the articles, in the manner specified, with some composition that will resist heat and exclude air from the surface, and heating the articles about the length of time specified.

No. 10,052.—Robert Waskey, of Mill Creek, Va.—*Improvement in Smut-Machines.*—Patented September 27th, 1853.

This improvement consists in inserting between the head of the beating cylinder A (see figure) and the fan-chamber E, a diaphragm F, with inclined openings *f f f*, &c., for the purpose of preventing the grain from being carried off with the smut by the action of the blast.

Claim.—The construction of the diaphragm F, the central part being solid, and that near the periphery made into several oblique valvular passages, to check or throw back the kernels of grain.

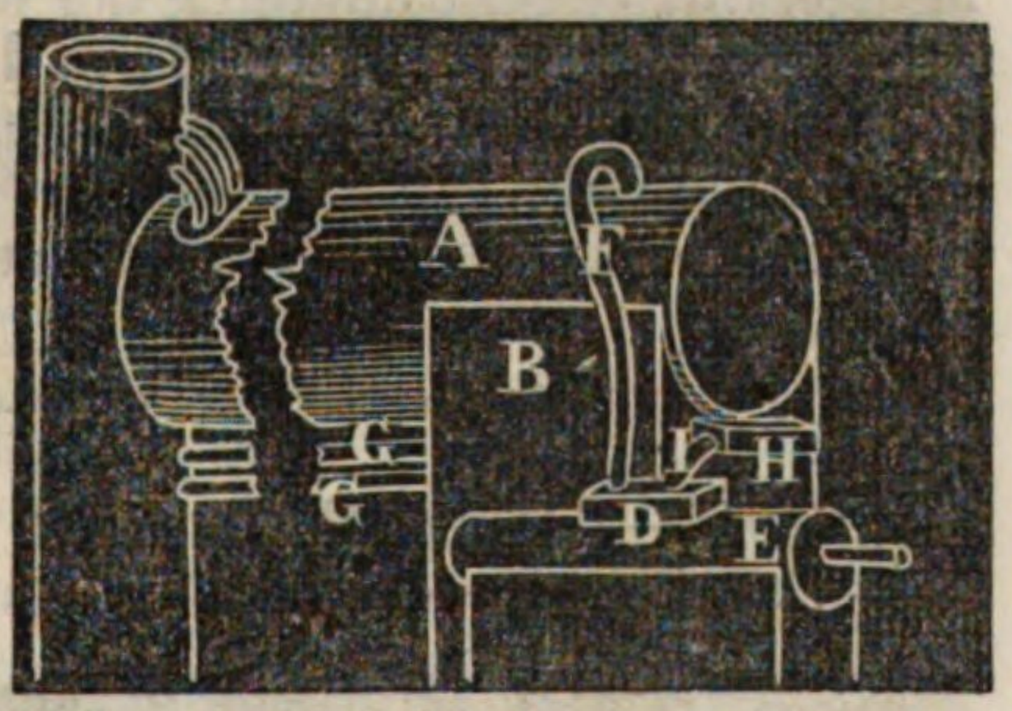
No. 10,053.—WILLIAM ZIMMERMAN, of Quincy, Ill.—*Improvement in Smut-Machines.*—Patented September 27th, 1853.



The nature of this invention consists of a series of two or more stationary cones W P (see figure), with one, two, three, or more revolving cones U V, placed alternately between the stationary cones. The grain is carried up the roughened inside surfaces of U and V, by the centrifugal force, and follows the direction of the arrows. L is the hopper; O, rotating disk; T, perforated ventilating box.

Claim.—(In the described machine for cleaning and scouring grain, hulling rice, pearling barley, hulling buckwheat, or other operations upon grain, seed, &c.) a series of two or more stationary cones, with one, two, or three, or more revolving cones, placed and operating as above described, so made and arranged as to perform the service required.

No. 10,054.—CHAS. E. WETHERED, JOHN WETHERED, and SAMUEL WETHERED, of Baltimore, Maryland.—*Improvement in the application of Steam.*—Patented September 27th, 1853.

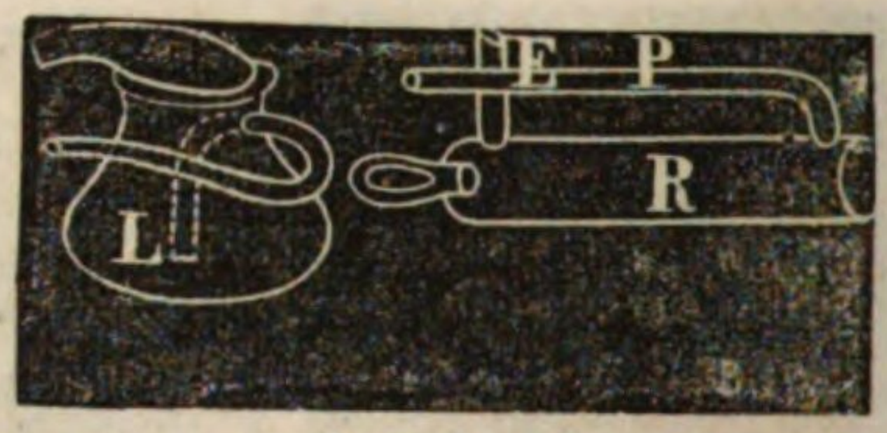


A is the boiler; B, furnace; C, chimney; D, steam-chest; F, usual steam-pipe; E, cylinder; G, surcharging pipes passing into the chimney, thence into the flue beneath the boiler, and thence through the furnace into the box H, which receives the three surcharging pipes; I, pipe connecting the box H and the steam-chest D.

The steam is converted into what is known as superheated steam, by its passage through the pipes which pass through the furnace. By means of this apparatus, which unites the ordinary and superheated steam, any water in the ordinary steam is at once converted into steam, and thus the expansion of the steam is increased as it passes into the cylinder.

Claim.—The combining of steam and surperheated or surcharged steam, for actuating engines, when generated, the elasticity increased, and operated as herein set forth.

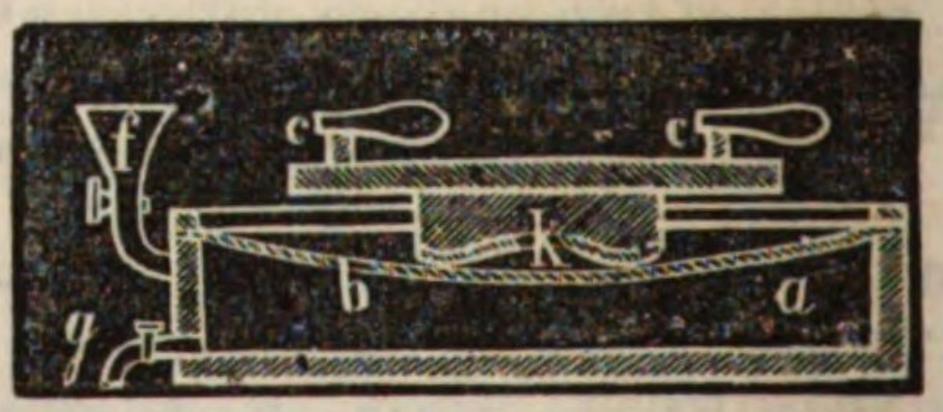
No. 10,055.—William Brown, of Glasgow, Scotland.—*Improvement in Distilling Coal*, &c.—Patented September 27th, 1853.



To fully describe the several operations or processes (by means of which the inventor produces lubricating oil, paraffine, and eupione, from coal or other bituminous matter) would require too much space for this Report.

Claim.—The use of superheated steam, as specified, for the purpose indicated. Also, the mode of separating and purifying eupione, lubricating oil, and paraffine, obtained by previous process.

No. 10,056.—Caleb B. Burnap, of Hartford, Conn.—*Improved Method of Veneering Surfaces.*—Patented September 27th, 1853.



The object of this invention is to make a more perfect and equal pressure on the surface of veneers, in gluing them to articles of any shape. The veneers are pressed on the surfaces to be veneered, by means of a fluid acting on a flexible substance interposed and making part of a vessel containing water or other fluid. The fluid may be used in a heated state, to keep the glue warm. (See figure.) *a*, vessel containing the water, which is covered with a sheet of vulcanized india-rubber *b*; *g*, discharge pipe, with a stop cock; *f*, pipe for letting in the water; *c c*, screws to screw down the veneer against the india-rubber sheet.

Claim.—The above description substantially embraces the inventor's claim.

No. 10,057.—Daniel P. Fales, of West Poultney, Vt.—*Improvement in Car-Wheels.*—Patented September 27th, 1853.

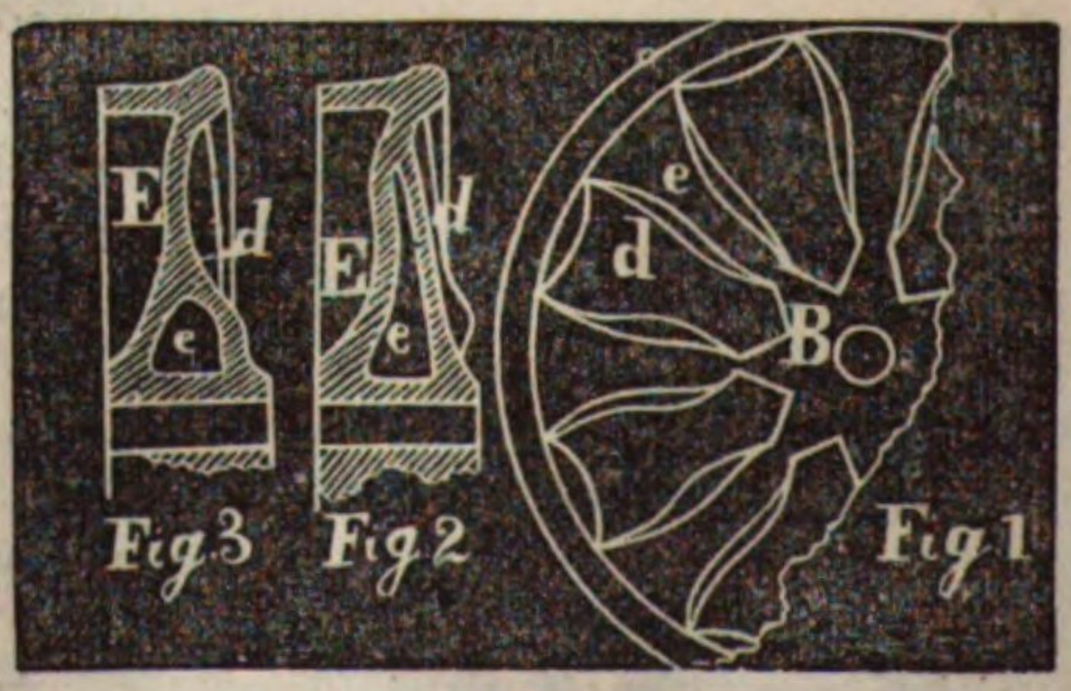
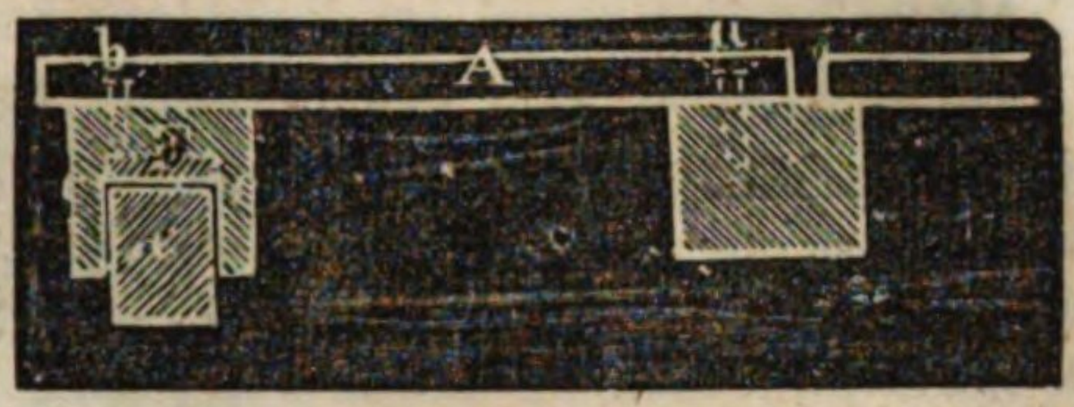


Fig. 1, front view. Fig. 2, section through *d*. Fig. 3, section through *e*. This improvement is intended to give strength to the rim of the wheel.

Claim.—The improved car-wheel composed of the face-plate E, which curves first inwards, then outwards, and then inwards, and expands into the rim, and the rear-plate B, which, by the series of curves represented in figures 2, 3, and 4, combines the inner end of the hub with the face-plate, and with alternate portions of the inner edge of the rim.

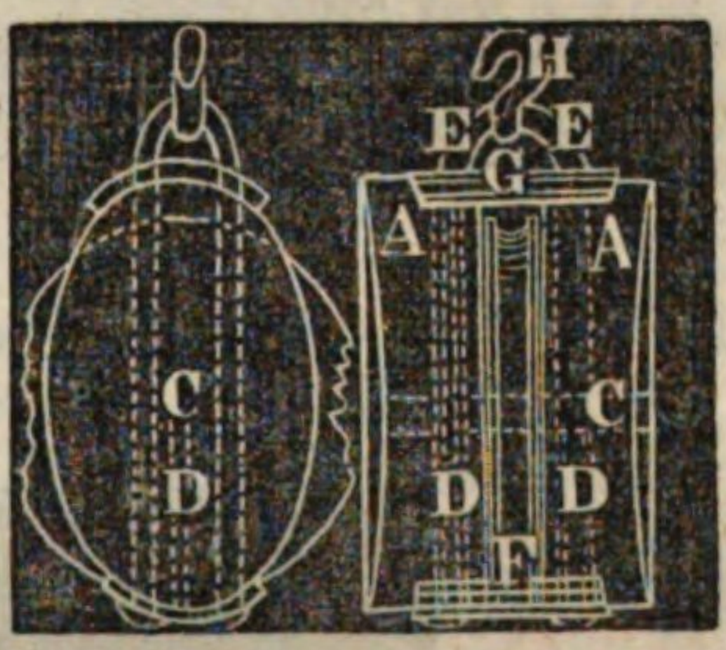
No. 10,058.—James M. Dick, of Buffalo, N. Y.—*Improved Railroad Switch.*—Patented September 27th, 1853.



The switch-rails A turn round pivot *a*, and are attached by bolts *b* to a cross-piece F, which is provided with flanges *c c*, and covers the whole length of cross-piece G.

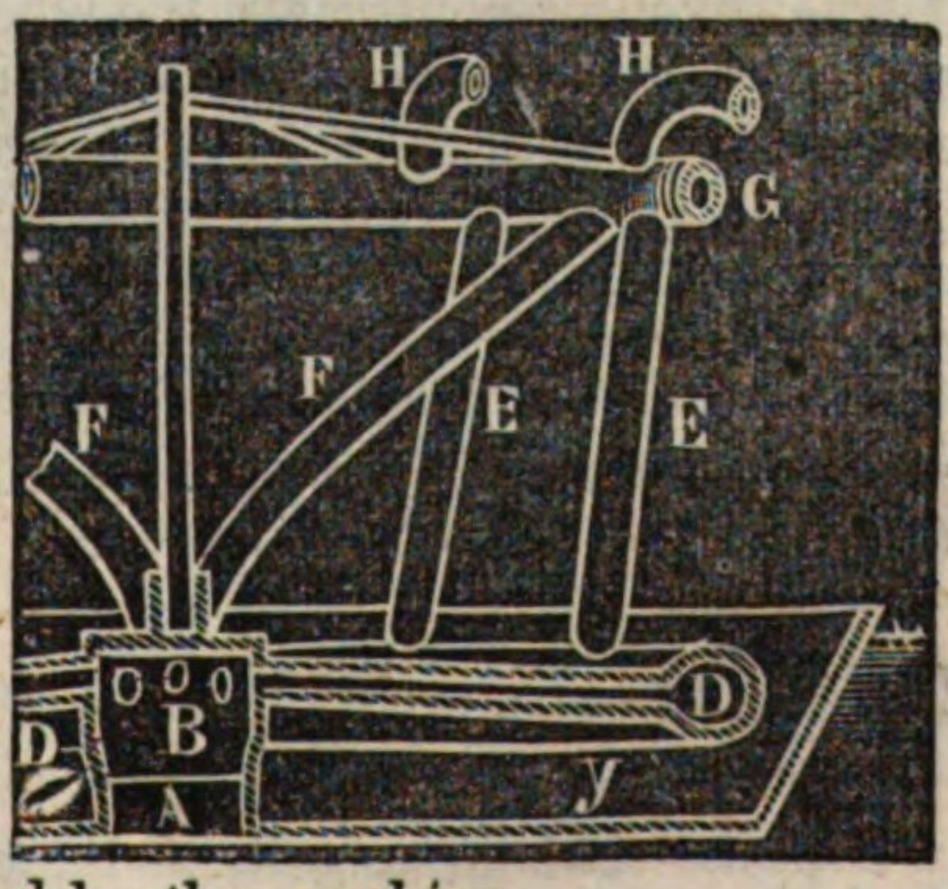
Claim.—The construction of the slide F with the depending flanges or side-plates *c*, which inclose the slide and cross-piece upon which it works, and afford a certain and effective protection against gravel, dirt, snow, sleet, ice, and other substances, which might otherwise enter between them, and derange the operation of the switch.

No. 10,059.—Charles H. Platt, of New York, N. Y.—*Improvement in Ships' Blocks.*—Patented September 27th, 1853.



Claim.—The employment or use of the rods E, passing through the cheeks A A in a direction transversely to their fibre, for the purpose of preventing the splitting of the cheeks; said rods also securing the plates F G to the cheeks, and forming a staple for the hook H. Also, the rods D D, placed underneath the ends of the shaft C, for the purpose of preventing the wearing of the cheeks, and thereby forming double bearings for the shaft, as set forth in the specification.

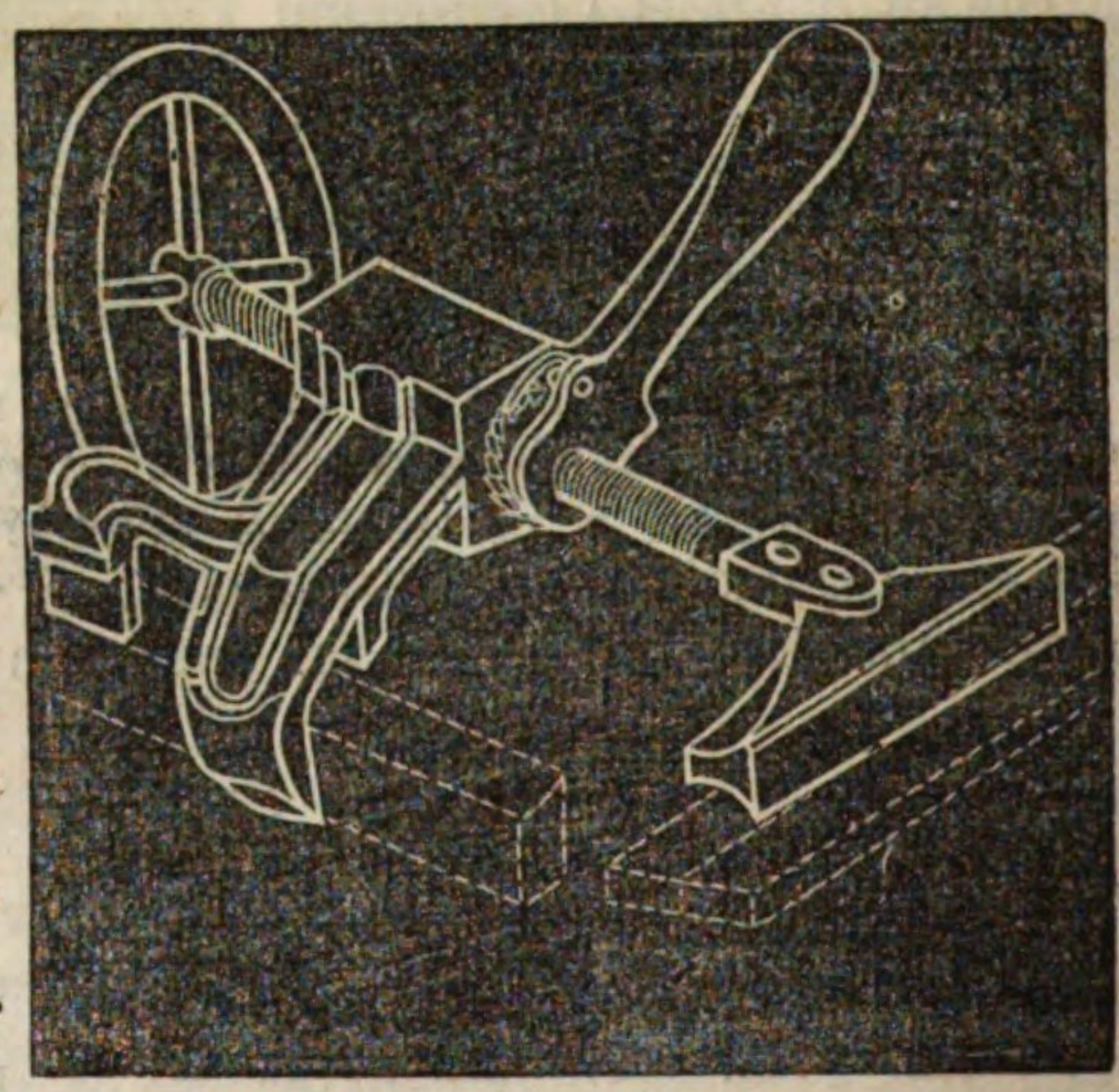
No. 10,060.—William Richardson, of New Orleans, La.—*Improvement in Centrifugal Draining-Machines.*—Patented September 27th, 1853.



By reference to the figure, the claim explains this machine.

Claim.—The arrangement in the tub *y* of the induction-tube A, supply-bulb B, and annular tube or ring D D, placed below the water-line exterior to the tub, in combination with the ascending tubes E E and F F, and a second annular tube G, having discharges H H, for the purpose of self-priming, protecting the machine from the resistance of water exterior thereto, and giving steadiness to the ascending column of water discharged by the machine.

No. 10,061.—Stephen E. Parish, of New York, N. Y.—*Improved Machine to Aid in Laying Floors.*—Patented September 27th, 1853.



The nature of this invention consists in making a brace, having a forked end, with shoulder pieces attached to its under side, so as to straddle one of the flooring beams, in combination with a screw working at right angles to the brace, and having on it a ratchet-wheel and lever, and pawls for working up the screw against the edge of the plank.

Claim.—The use of the brace having clawed ends, for acting at opposite sides of a beam, in combination with a screw working at right angles to the same, substantially in principle of construction and operation as set forth.

No. 10,062.—Joel Baker, of Boston, Mass.—*Improvement in Railroad Car-Wheels.*—Patented October 4th, 1853.

The inventor constructs the wheel of two distinct convex hub-plates, and two distinct rim-plates, each being connected by a number of short, small branches, which pass through openings of the opposite convex-plate, up to the rim-plate, interlacing the convex and rim plates at proper intervals, in such a manner as to form a whole compact wheel of great strength. (See fig.)

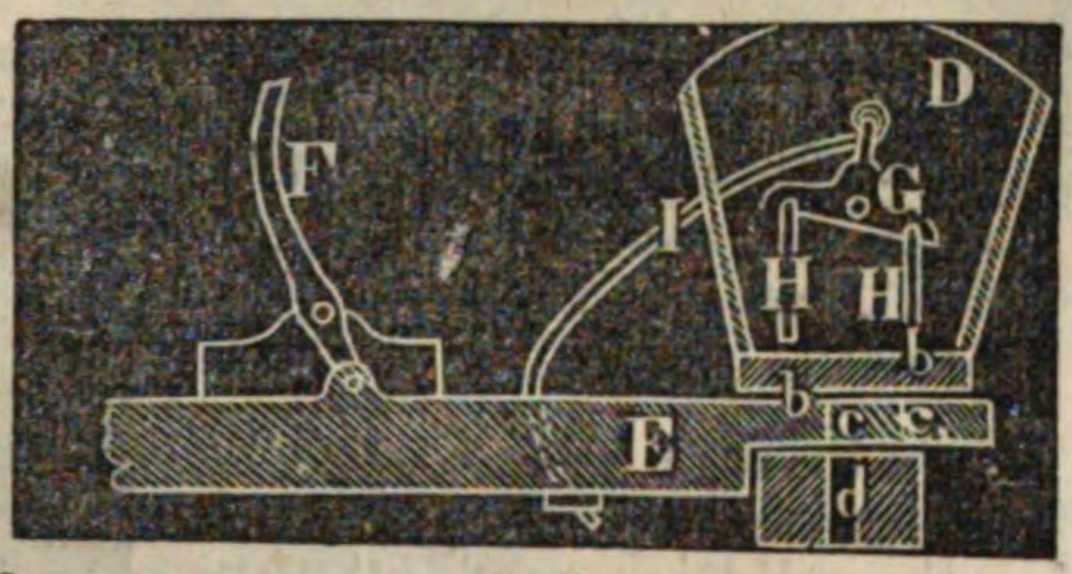
Claim.—The connection and intersection of the convex and rim plates, by independent and interlacing branches, substantially as set forth.

No. 10,063.—Elihu R. Benson, of Warsaw, N. Y.—*Improvement in Window-Blinds.*—Patented October 4th, 1853.

Claim.—The arrangement for moving the hollow augers back and forth, in performing the milling of both ends of the slats at once, com-

bined with the slide, operated substantially in the manner and for the purposes set forth in the specification. Also, the manner of feeding the dressing and sticking portions of the machine, by means of a slide. Also, the method of sticking the wires by means of hooks and drivers, operated as specified.

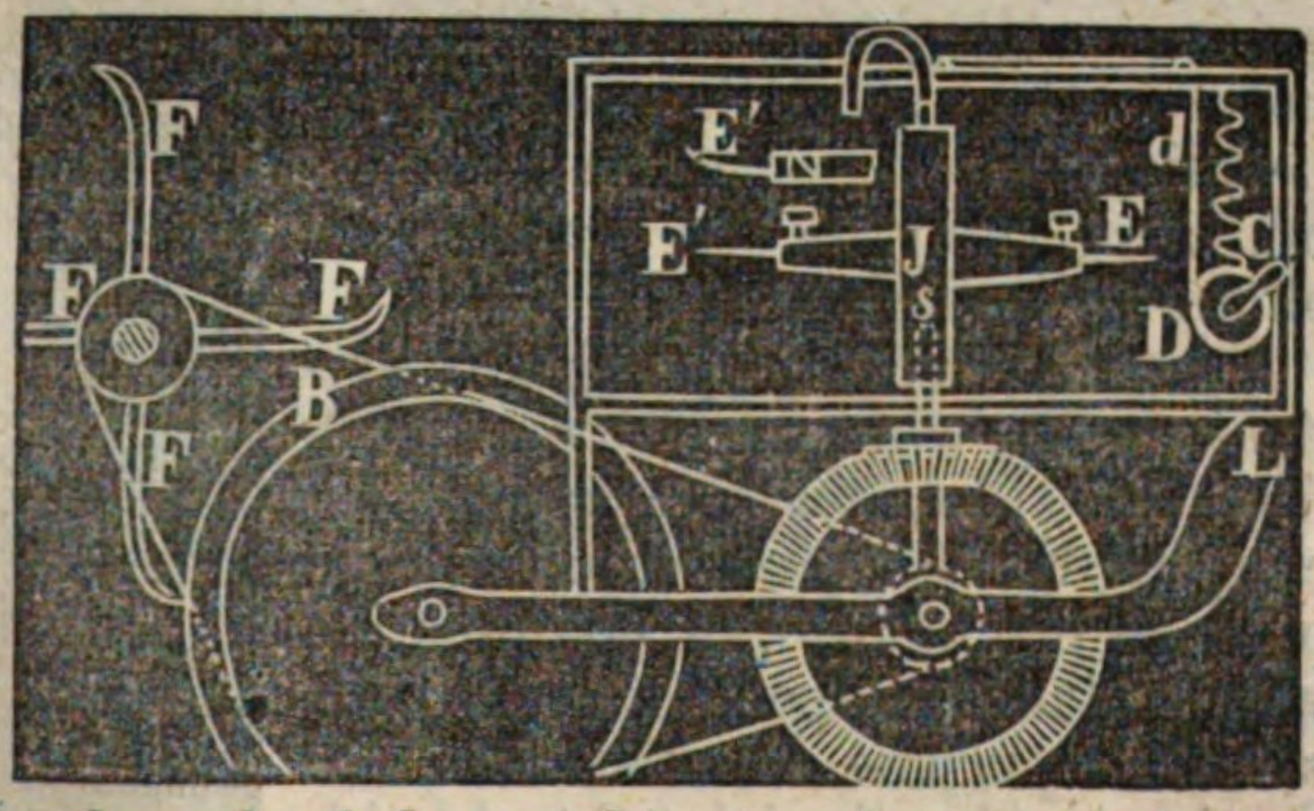
No. 10,064.—GARDNER A. BRUCE, of Mechanicsburgh, Ill.—*Improvements in Drills for Planting Corn.*—Patented October 4th, 1853.



This invention consists in the manner of distributing the seed by means of a small balance-beam G, placed in the hopper D (see fig.), the beam having wires H H attached to each end, which, as the beam is operated, fit or work alternately in apertures *b b* in the bottom of the hopper, and properly adjust the seed in the apertures *c c* of the dropping slide E, which extends entirely across the frame. Underneath the hopper there is a hole *d* through the side-piece of the frame. The rod I connects the balance-beam G to E; E is worked forward and backward by means of the lever F.

Claim.—The employment or use of the balance-beams G G, with the rods H H attached to them, and operating as described, for the purpose of properly adjusting the seed in the holes of the dropping slide, and also to prevent the clogging of the same, as shown and described in the body of the specification.

No. 10,065.—A. A. DICKSON, of Griffin, Ga.—*Improvement in Machines for Topping Cotton.*—Patented October 4th, 1853.



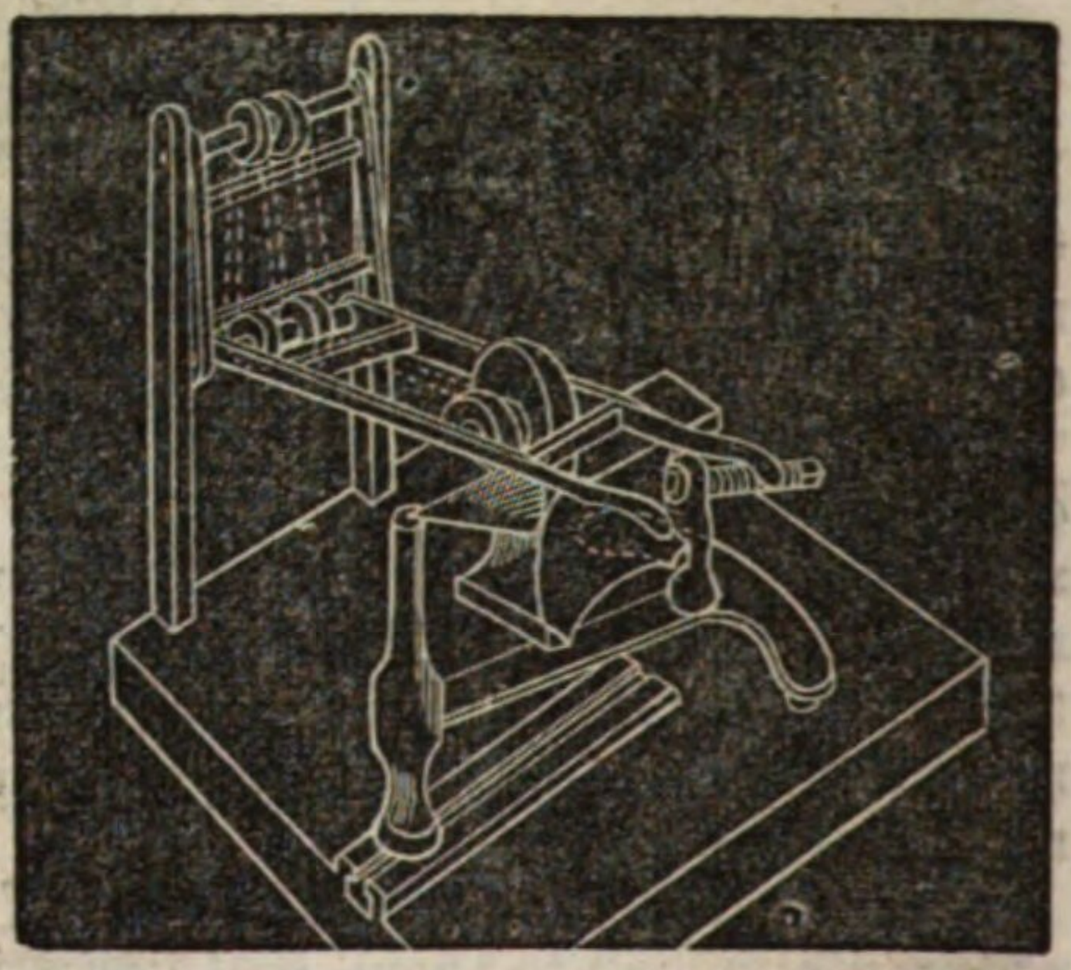
This invention consists in the employment of two sets of cutters, one set E E being secured horizontally on a vertical revolving shaft over the centre of the machine, so as to cut off the tops of the cotton; and the other set F F being arranged vertically on a horizontal revolving shaft, at the back end of the machine, or just behind the propelling wheel B, so as to lop off the ends of the branches which lap across the middle of the row. The motion of the cutters is caused by the propelling wheel. The cutters are made adjustable to suit the width of the rows by means of the set-screws, and to suit their height by means of the cap of J, which is made to slide up and down on the square top part *s* of the shaft. This latter adjustment is effected

by turning crank C, and thereby winding the cord *d* round the drum D. E′ is a top view of E. The machine is moved like a wheelbarrow, the handles being at L.

Claim.—The employment of two sets of cutters EE and FF, one set being adjustable and revolving in a horizontal direction, and the other being fixed and revolving in a vertical direction, and both sets being set in operation by the action of the driving-wheel B in any manner described, and for the purpose specified.

No. 10,066.—MARK FISHER & JOHN H. NORRIS, of Trenton, N. J.—*Apparatus for Polishing Anvils.*—Patented October 4th, 1853.

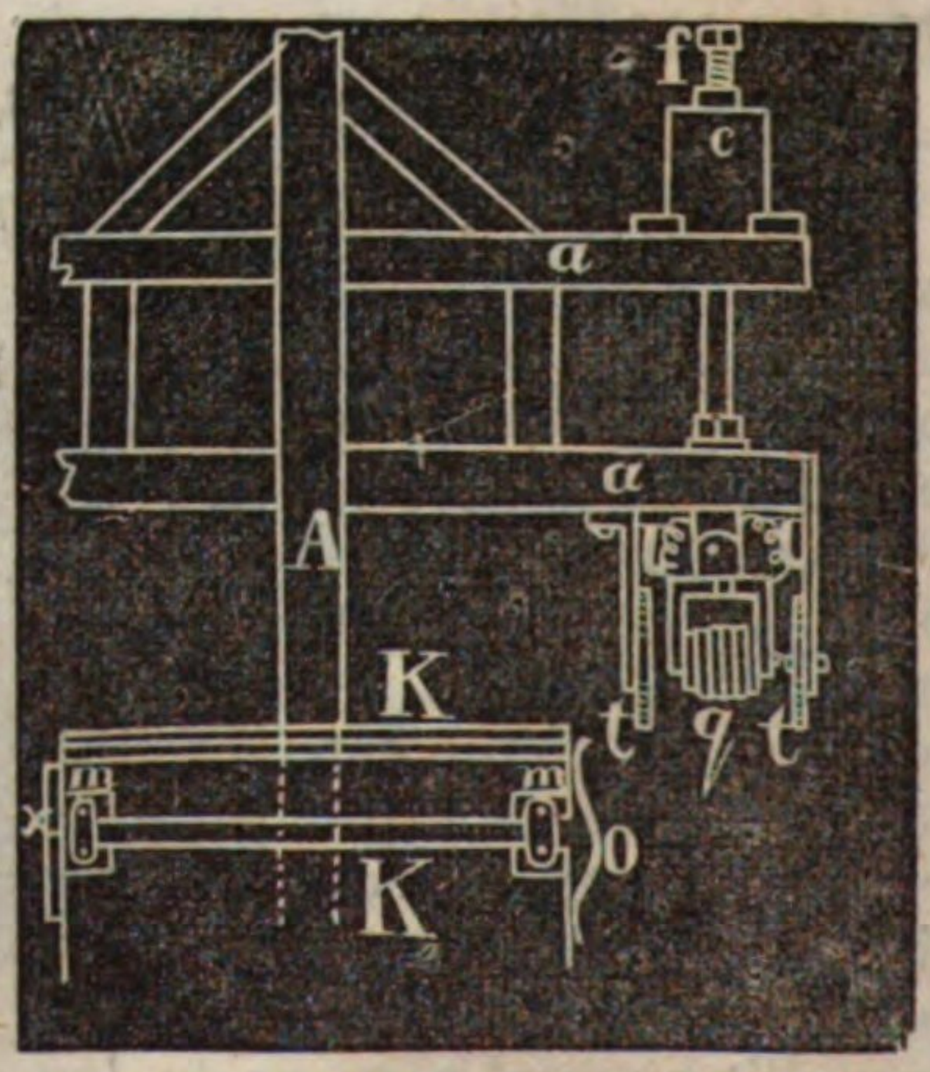
(See figure.)



Claim.—Suspending the anvil in the sliding and vibrating frame, and arranging it in respect to the polishing part of the apparatus, and operating them as described fully in the specification.

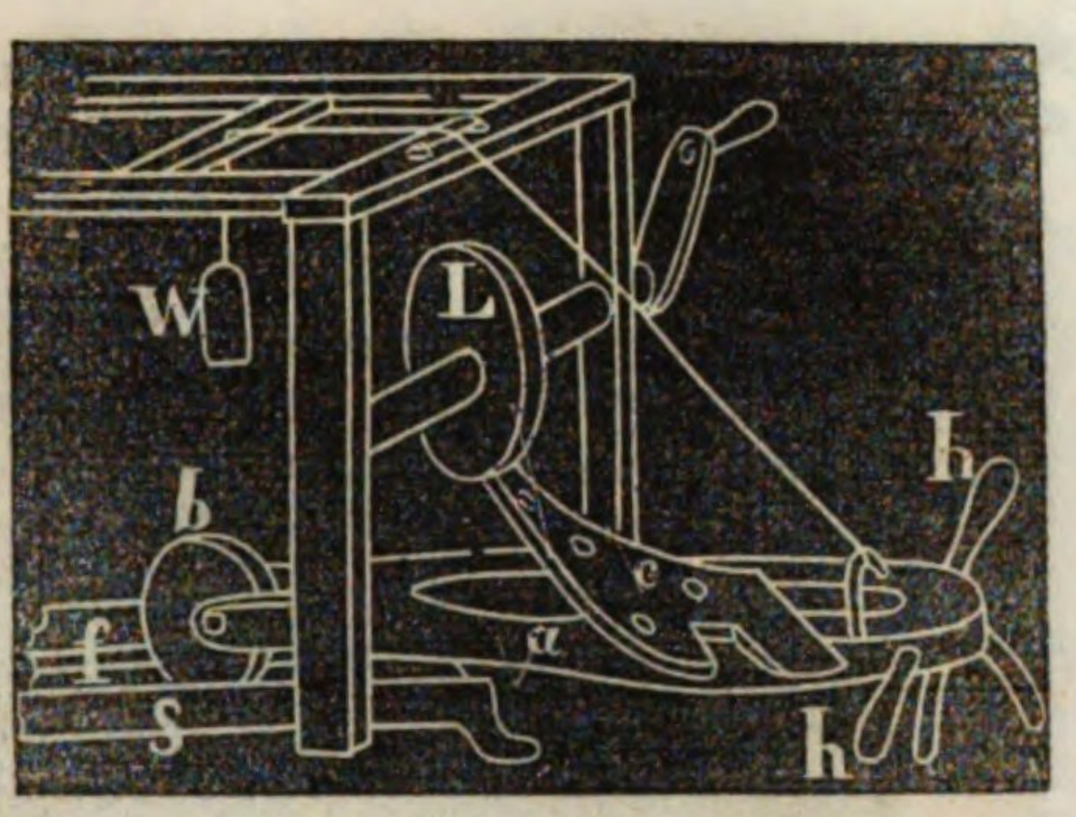
No. 10,067.—JOSEPH F. FLANDERS, of Newburyport, Mass.—*Improvement in Machines for Dressing Leather.*—Patented October 4th, 1853.

The main features of this invention consist, first, in the employment of a vertical shaft A (see fig.), with arms extending from its sides, for the purpose of carrying the tools; in the peculiar construction of the tool-holder; and, lastly, in the construction of the horizontal table.



Claim.—The employment of a vertical-shaft A, with arms *a a* extending from its sides, for the purpose of carrying the tools and their accompanying mechanism, in combination with a plain surface horizontal table K, for the purpose described in specification. Also, the jointed tool-holder, either with or without springs, constructed substantially as described. Also, the arrangement of the movable table, permitting of an endwise, and at the same time downward motion, or the equivalent thereof.

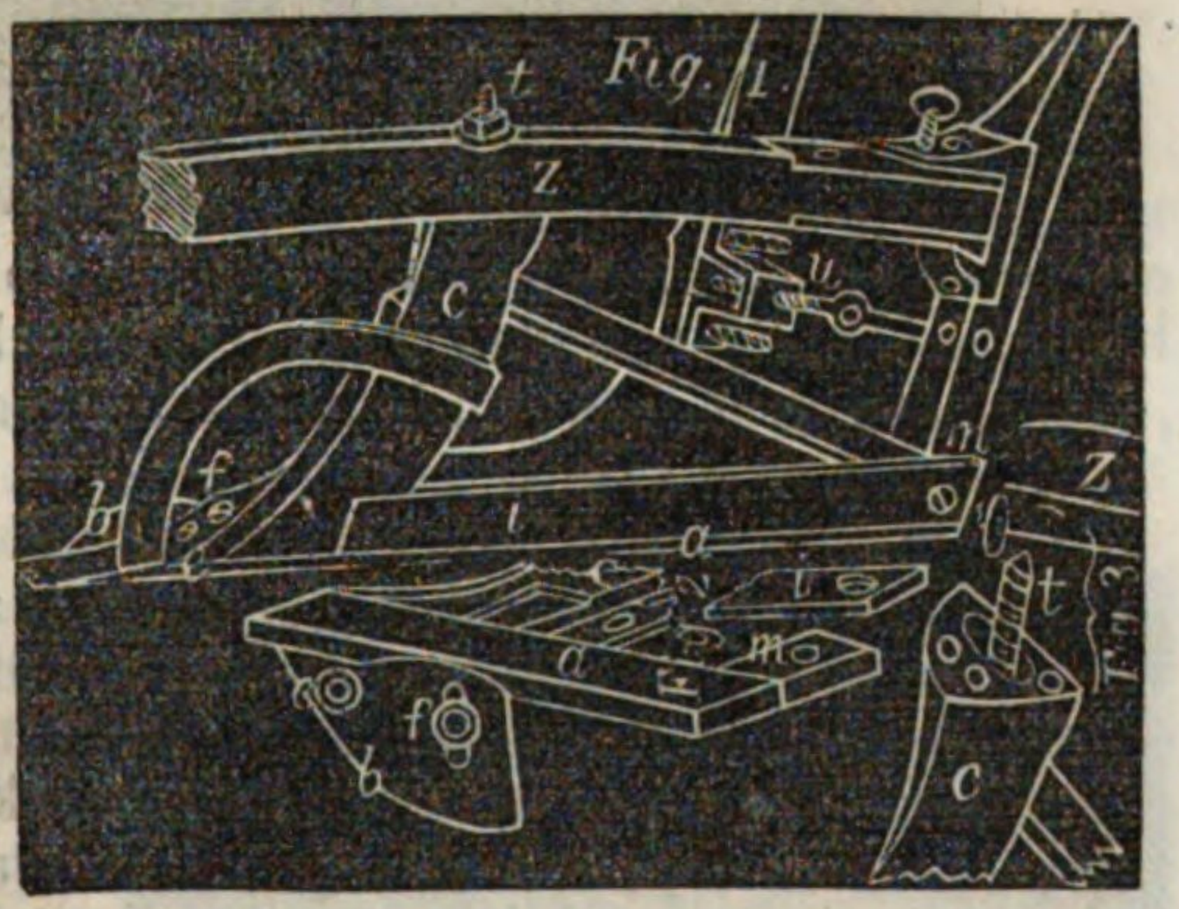
No. 10,068.—Joshua Gibbs, of Canton, Ohio.—*Improvement in Apparatus for Grinding Plough Castings.*—Patented October 4th, 1853.



(See fig.) The carriage *a* is moved along under the stone L by the operator, who takes hold of the handles *h h*, for the purpose—the wheel *b* moving in groove *f* of stand *s*.

Claim.—The carriage *a*, upon which the casting *c* is fastened by means of weight w, and grooved stand *s*, upon which the carriage is moved.

No. 10,069.—Robert A. Graham, of New Paris, Ohio.—*Improvement in Ploughs.*—Patented October 4th, 1853.



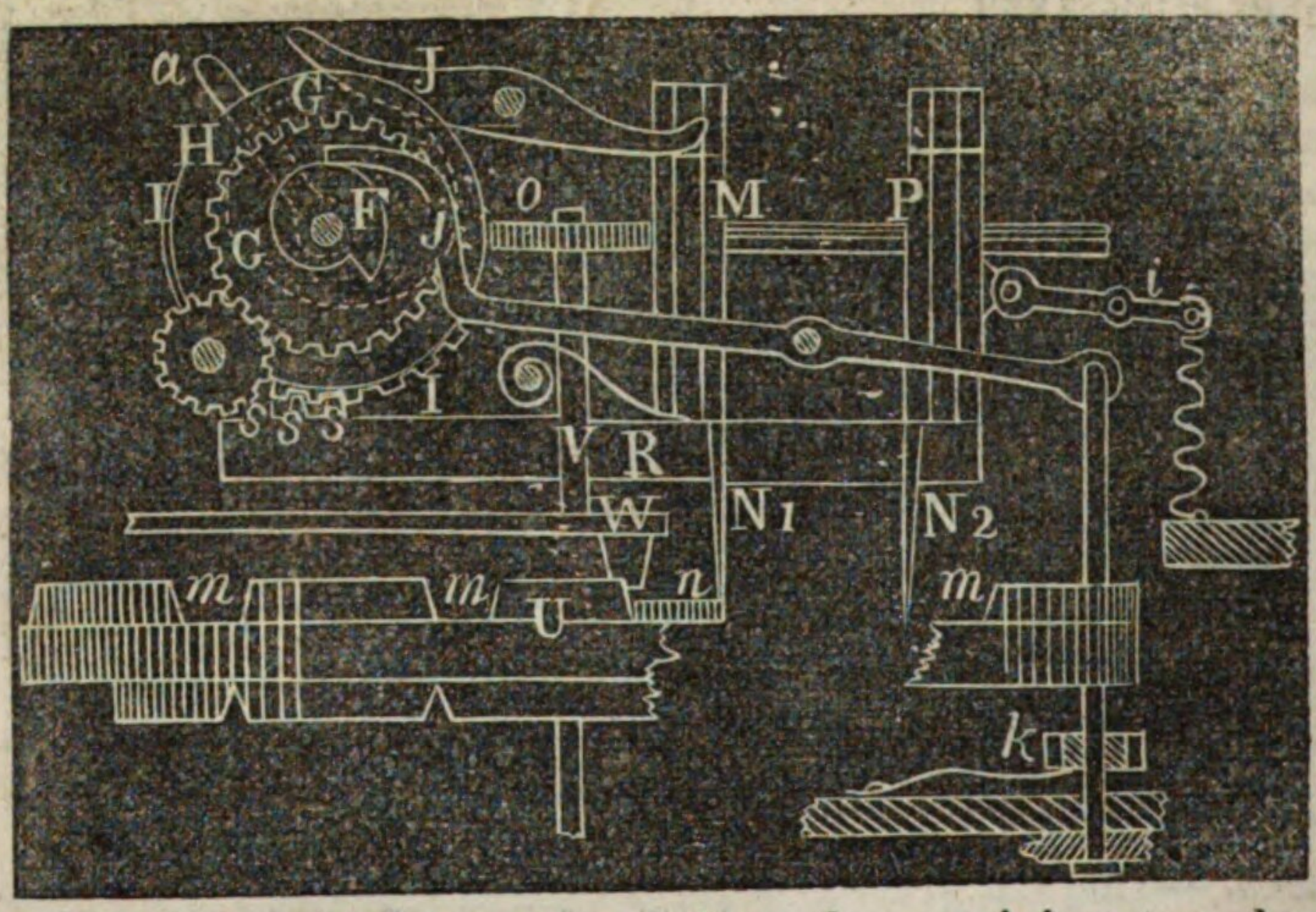
By reference to the figure the claim will explain this improvement.

Claim.—The screw-bolt *u*, or its equivalent, for setting out or in the rear edge of the mould-board, with respect to the land-side, acting in combination with the bolts *e* and *f*; which, being tightened, attach to each other the mould-moard, sheath, and lipped or flanged share; and which bolts, being temporarily relaxed, permit the vibration of the mould-board about the bolt *e*, without interrupting the continuity of ploughing surface, or disconnecting the several parts. Also, the shifting or adjustable socket attachment of the beam to the sheath, in combination with the dovetail and adjustable connection of the rear end of the beam to the helve, or equivalent devices, so as to vary the direction of the draft of the plough, to suit the requirement of a change in the flare of the mould-board, and other objects, as explained in the specification.

No. 10,070.—Thomas C. Hargreaves, of Schenectady, N. Y.—*Machine for Husking Corn and Maize.*—Patented October 4th, 1853.

(See fig.) The ears of corn, having first been broken from the stalks or gathered, are placed in the passage-ways *m m* of the circular plate U, with the stalk end towards the centre of the plate, above the rim *n*, and the base of the ear against the rim *n*. The machine is made to operate by turning the handle *a*; M and P are gates with cutters N^1 N^2, to descend and pierce the ear: the chisels being about five-eighths of an inch broad, they partially sever some of the leaves on the upper side of

the husk, and divide the cob at or through the first row of kernels, but do not cut any of the sides or underpart of the husk. When thus cut, the cam-wheel I acts on the cogs *s s s* on the slide R, and forces the gate P with cutter N^2, and the ear of corn free from any husk to the



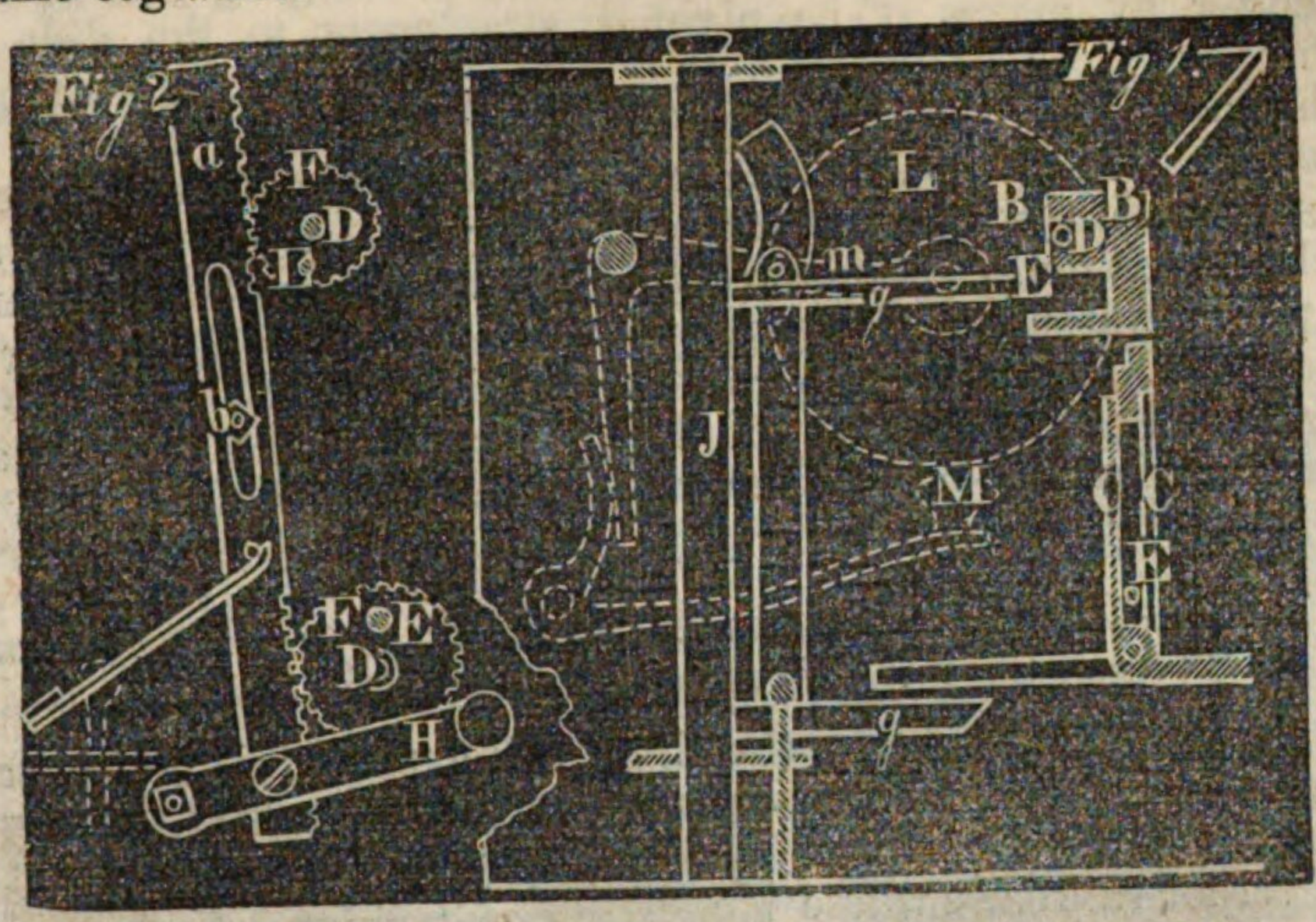
outer edge of the circular plate U, into the receiving trough. The husk is finally removed from the machine by the elbow W. The spring *i* returns gate P to its position for action. G and I are cams, *j* is a lever acting on spring and lever *k*.

Claim.—The application of the chisel or chisels, cutter or cutters N, in combination with the gate M, or gates M and P, operated by gearing or other means. Also, the construction of the circular plate U or its equivalent, in combination with the cutters for severing the cob, and the elbow-lever for discharging the husks. Also, the combination of the cam F, lever *j*, and spring *k* with stud *l*, for holding the circular plate U stationary, whilst removing the ear and husk from the machine, or any other equivalent.

No. 10,071.—William Horsfall, of New York, N. Y.—*Annunciators for Hotels, &c.*—Patented October 4th, 1835.

The rod J (fig. 1), having a horizontal lifting or tripping arm *g*, which extends underneath each of the swinging index-plates B; the rod and arm being arranged in such relation to the rocking-frame which carries the alarm bell L, that as either of the rods is raised for the purpose of tripping one of the index-plates, and exposing its number to view, the frame and bell will also be raised, and the pendulous hammer M allowed to descend some distance; and consequently when the rod descends, which it does instantly after the index-plate has been tripped, the rocking-frame and its alarm bell will descend also, and cause a short finger of the pendulous hammer to be operated upon by a lever connected to the arm *m*, which sustains the bell, and the long arm or weighted end of the pendulous hammer to rise, strike the bell, and sound the alarm. B vibrates on horizontal rod D; B is thrown back after indicating its number, by means of the eccentric-

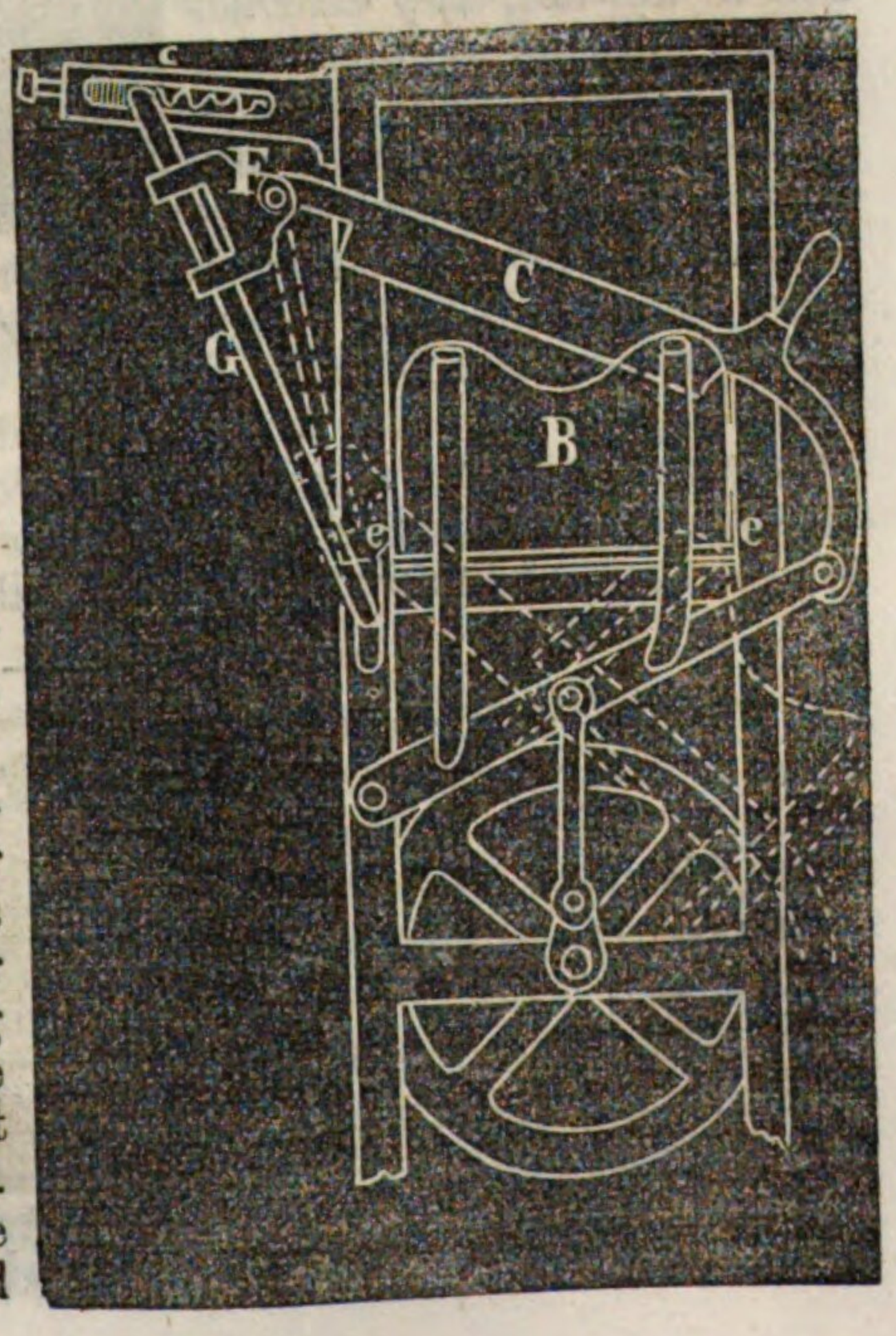
rod E; D is secured in the cog-wheel F (fig. 2), which gears into the movable rack-bar *a*, and the rod E is also secured eccentrically in the same cog-wheel.



Claim.—The constructing and arranging the index-plates B B B or C C C, in combination with the alarm and its necessary attachments, so that each plate can be operated, and its number exposed to view, and also the alarm sounded instantly after, by simply employing a rod J, having a tripping-arm *g*. Also, the manner of throwing the index-plates back to their proper position, by means of the eccentric-rod E, in combination with the peculiar construction and arrangement of the said index-plates, the eccentric being operated in any manner equivalent to that shown and described.

No. 10,072.—RICHARD KETCHAM, of Seneca Castle, N. Y. —*Improvement in Straw-Cutters.*—Patented October 4th, 1853.

The main feature of this invention consists in the manner of hanging the knife, so that its "draw" may be increased or diminished, to suit the varying resistance of the straw to be cut; also to prevent clogging at the finishing end of the knife. *e e* is the cutting edge of the table; C, the cutter; the dotted

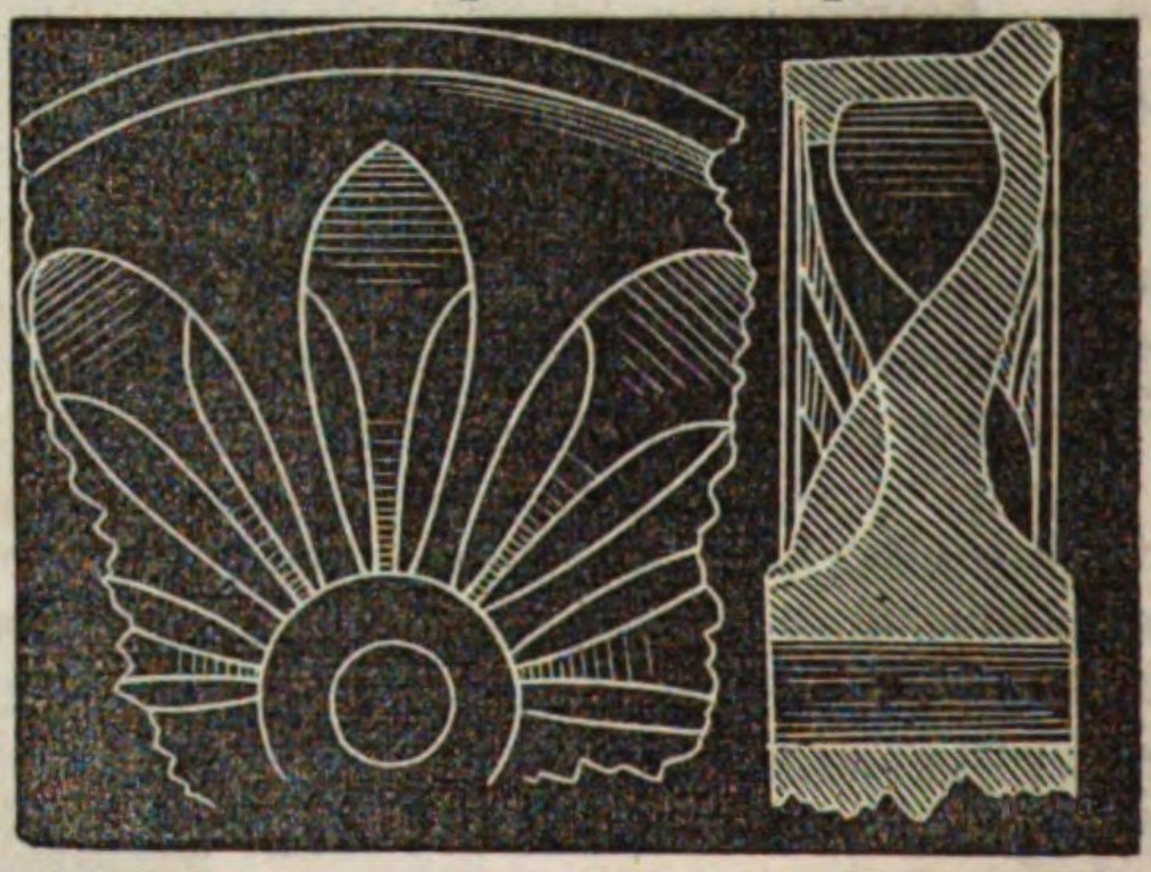


lines represent the position of the knife C and the gauge B, after the cutting has been performed.

Claim.—The method herein described, of hanging and operating the cutter by means of its pivoted attachment to the slide F, in combination with guide-rod G, the latter being made adjustable by the helical-spring *c* at the top, or other equivalent device. Also, in combination with the inclined reciprocating knife, and simultaneously with the descent thereof, giving to the gauge B a lateral curvilinear or oblique downward action away from the rear end of the knife towards the front end thereof, and below the cutting edge of the table, whereby the straw is restrained from being crowded towards the back end of the knife by the inclination of the cut, and a free escape is established for the cut particles to pass off.

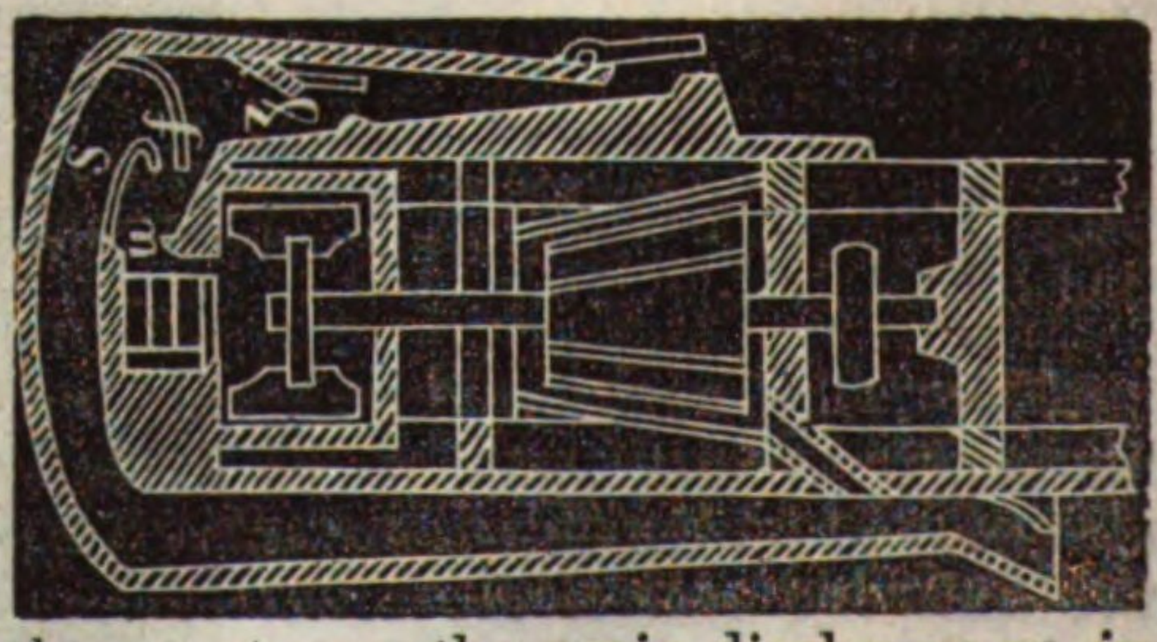
No. 10,073.—ZADOCK H. MANN, of Newport, Ky.—*Improvement in Cast-Iron Car-Wheels.*—Patented October 20th, 1853.

By reference to the figure, the claim will explain this improvement.



Claim.—The construction as described of a cast-iron car-wheel for railroads, whose web, or portion connecting the hub and rim, consists at the hub of broad radiating plates in the plane of the axis, whence turning alternately to the right and to the left, they contract in the direction parallel with the axis, and expand proportionally in the direction of revolution, those of each alternate set uniting as they approach their respective margins of the rim-concave, so as to form flanges having openings left for each intermediate plate on the other side, forming a braced and counterbraced wheel, possessing the requisite lateral stability and continued support at the rim, together with adequate provision for the strain arising from shrinkage, &c., whether the web be formed in a "cyma-reversa" curve as described, or in any way substantially equivalent.

No. 10,074.—BENJAMIN RUTTER and HENRY ROUZER, of Piqua, Ohio. — *Machine for Cleaning and Separating Grain.*—Patented October 4th, 1853.



By reference to the annexed figure, the claim explains this machine.

Claim.—The narrowing of the spout near the grain discharge *m*, in combination with the curved passages *s*, *t*, *u*, and *z*, which receive and

discharge at their respective apertures the light grain and trash taken from the grain-discharge aperture.

No. 10,075.—JOHN C. F. SALOMON, of Washington, D. C.—*Improvement in Rotary Steam-Engines.*—Patented October 4th, 1853.

(See figure.) C is the cylinder; P is the piston of the same height as the cylinder, and elliptical in form, its greatest diameter being equal to the inner diameter of the cylinder; at top and bottom it has an annular flange, which fits an annular groove in the bottom and top of the cylinder, and is made to fit steam-tight by packings. Four abutments slide through four sides of the cylinder A. The annular space *s s* outside of the cylinder always being filled with steam, the abutments are always pressed against the elliptical surface of the piston, thereby dividing the space between the elliptical surface of the piston and the inner side of the cylinder in spaces which have no communication with each other; by means of valves, these spaces are made to communicate with the supply pipes 1 1 1 1, and the exhaust pipes 2 2 2 2, and thereby the piston is made to revolve. The valves are moved by two cams placed on the axis of the piston.

Claim.—The combination of the elliptic wheel and its cylinder, with the sliding abutments or stops, arranged in such manner that a continuous propelling force may be communicated to the wheel without exposing it to the unequal pressure of the fluid on opposite sides of its axis throughout the entire revolution in either direction. Also, in combination with the revolving wheel or piston, the arrangement and operation of the valves in such a manner, that as the effective propelling area of the piston surface exposed to the impelling fluid between either two abutments diminishes, the wheel is assisted by an increasing area of piston surface, exposed to the action of the fluid on the opposite sides of the abutments, as specified, whereby the propelling fluid may be worked expansively without impairing the uniformity of the active power of the engine, as herein set forth.

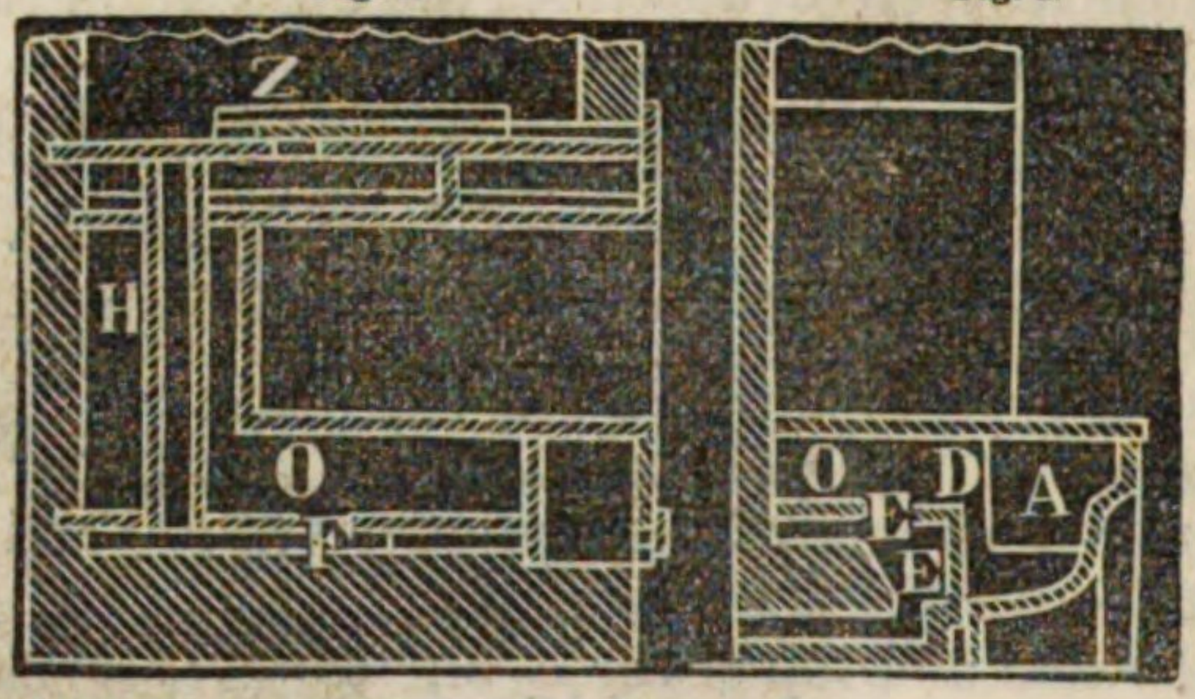
No. 10,076.—GEORGE S. G. SPENCE, of Boston, Mass.—*Improvement in Cooking-Ranges.*—Patented October 4th, 1853.

Figure 1 is a section through the fire-grate.

Figure 2 is a section through the middle of the oven.

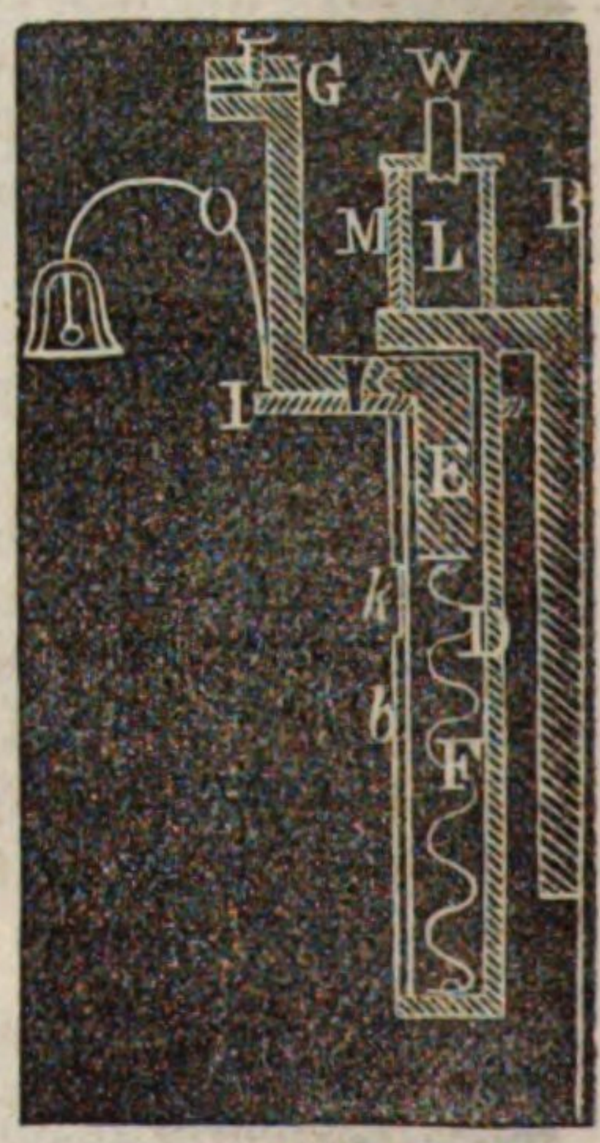
Claim.—The arrangement of the openings Y Y, and damper Z, with respect to the arrangement of smoke-flues above and below them, substantially as above specified; whereby the heat is caused to pass under the back half of the bottom of the oven up alongside the entire back of the oven, and up the rear portion of the left side of the oven, and over the top of the oven into the chimney, instead of carrying it entirely around the oven. Also, the arrangement of the fire-place A,

Fig. 2. Fig. 1.



boiling-chamber D, and smoke-flues leading under the oven, and in rear of the back thereof, in combination with the peculiar arrangement of the hot air-chambers E, E, and H; whereby the fire-place and oven-flues are not only made to heat the air-flues, but the bottom plate of the boiling-chamber is also made to impart heat thereto, and the back as well as the front of the upright air-flue H is also heated by the smoke-flue, through which it passes.

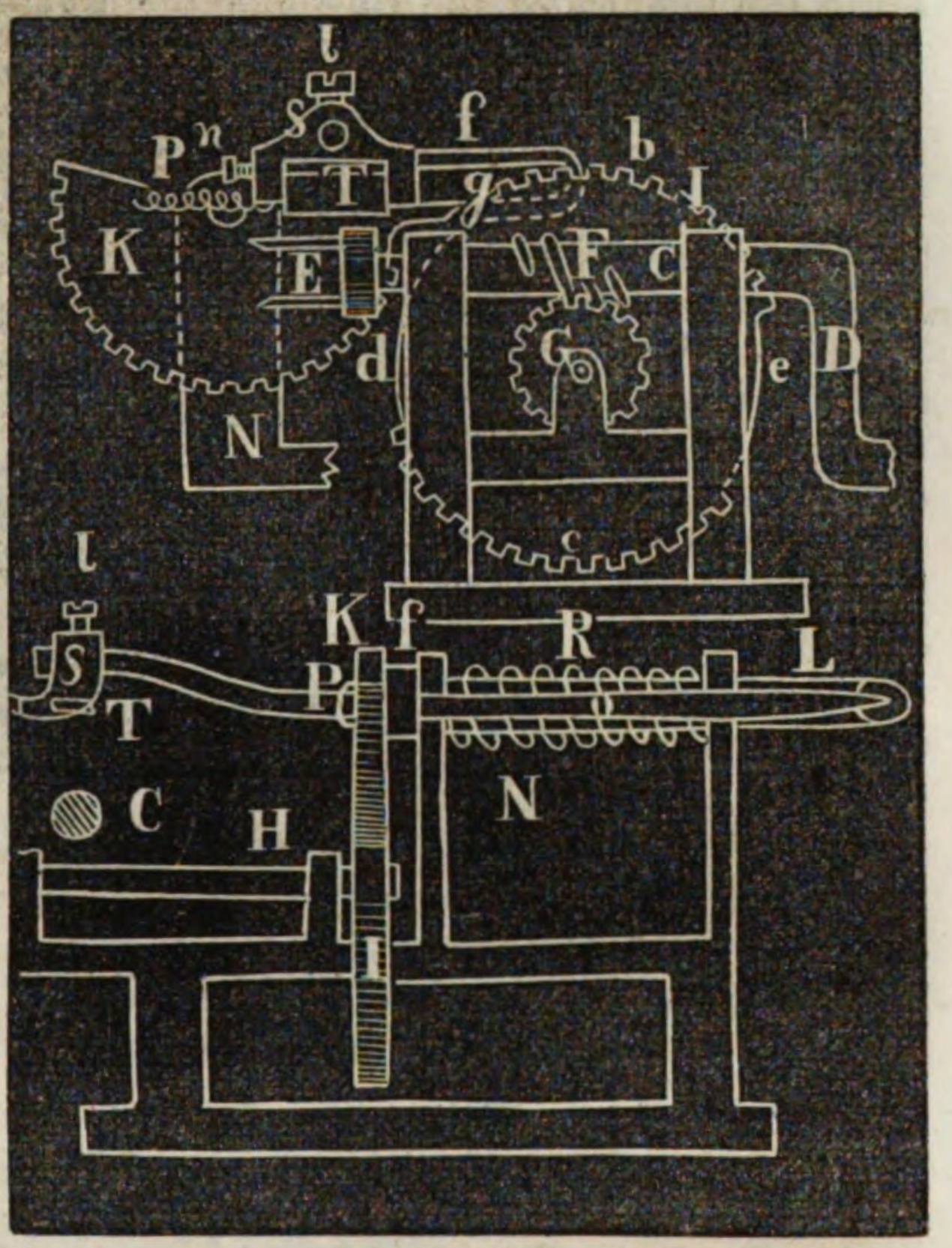
No. 10,077.—EDWARD BROWN, of Rindge, N. H.—*Improved Burglars' Alarms or Annunciators.*—Patented October 4th, 1853.



B, door-frame; *b*, slot in cylindrical tube D; E, cylindrical slider with tube D resting on spring F, and provided with a horizontal arm *c*; G, friction match holder; I, arm projecting laterally and passing a short distance over the door, and beyond its edge when the slider is depressed; *k*, notch at the lowest position to which it is desired to depress the slider, the notch being large enough to receive the horizontal part of arm *c* when the slider is turned for the purpose of moving it into the notch to hold the slider down; L, spirit-lamp, to which is fixed a piece of sand-paper M for the match to rub against. Plate I being forced downwards and laterally until it catches in the notch, the apparatus is set for sounding an alarm and lighting the wick W of the lamp. The door, on being opened, is moved against arm I, and thereby *c* is released out of the notch.

Claim.—The improvement of so connecting the match-holder and the bell-spring *o* with the slide E, that the spring F of the slide, on being set free by the opening of the door, shall not only elevate the match-holder, but set the bell in motion.

No. 10,078.—Ephraim L. Pratt, of Worcester, Mass.—*Improvement in Apple-Paring Machines.*—Patented October 4th, 1853.



When this machine is to be operated, the apple is placed upon the fork E (see fig.), and the shaft C turned by the crank D. The worm F turns the gear G, with the shaft H and gear I, which drives the sector gear K, which carries the shaft L and rod O, so as to move the knife T over the surface of the apple as it is turned by the fork E.

Claim.—Hanging or connecting the block *s*, which carries the knife to the rod which carries the block, so that the block and knife can vibrate in one or either direction (by means substantially as described in specification), so as to allow the knife to vibrate and accommodate itself to any irregularities in the surface of the apple (as it is turned by the fork E).

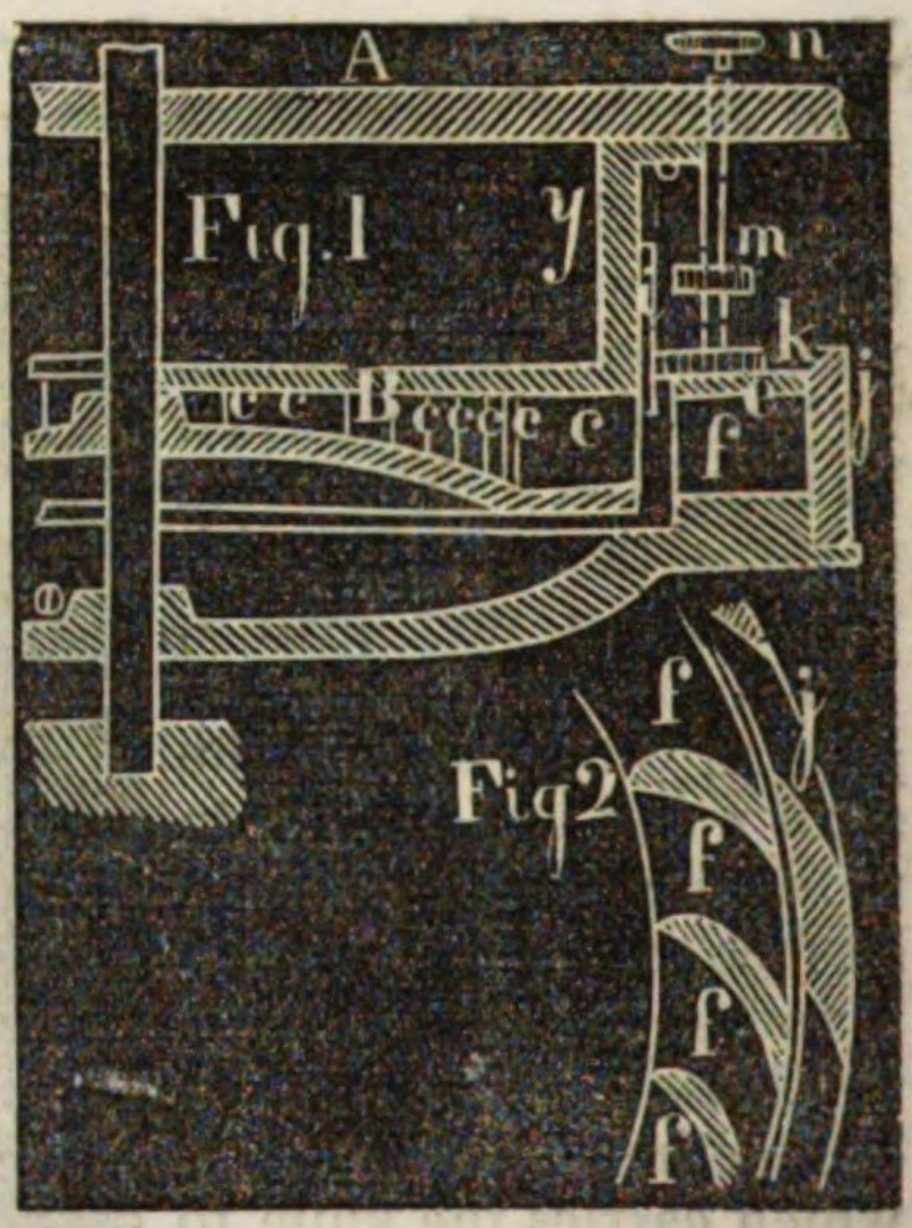
No. 10,079.—Joseph C. Strode, of East Bradford Township, Pa.—*Hydraulic Ram.*—Patented October 4th, 1853.

This invention consists in laying the driving-pipe which conveys the water from the head to the ram in the brachystochrone curve, which is that curve in which a body will descend from one point to another point not in the same vertical line in the shortest time, and therefore with the greatest mean velocity. This property of the above curve will enable a greater quantity of water to be raised by a machine of a given size, than can be raised with the driving-pipe laid in any other direction, and will cause a greater reaction of the water to take place after the closing of the valves leading to the air-chamber, and thus more perfectly insure the opening of the discharge-valve.

Claim.—The application of the brachystochrone curve to the conduit pipes of hydraulic rams, in the manner and for the purposes set forth.

No. 10,080.—Henry Vandewater, of Albany, N. Y.—*Improvement in Turbines or Water-Wheels.*—Patented October 4th, 1853.

In fig. 1 A is the penstock; B, chute-chamber; *ff*, buckets of the turbine; *b*, annular ring which covers the chutes *c c c c*, and rises in a perpendicular



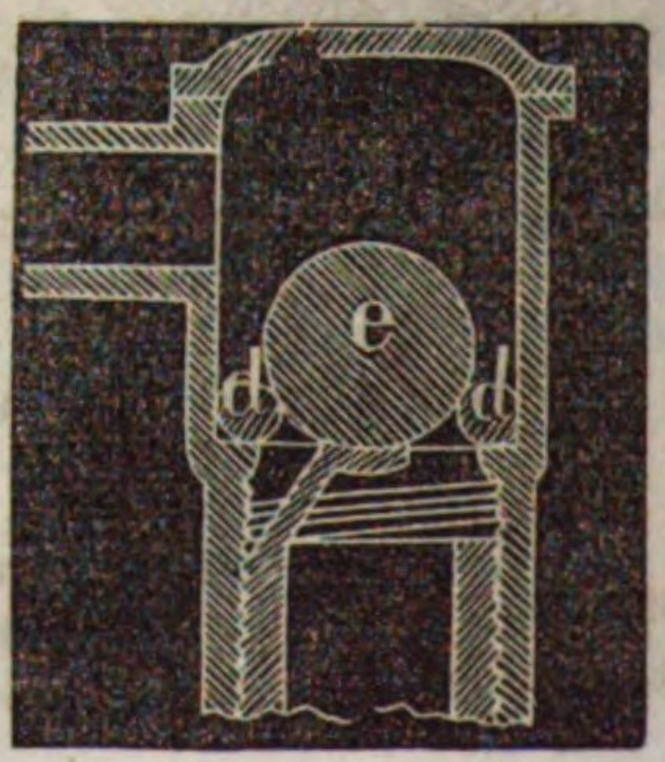
y, which is fastened to the underside of the penstock; *e*, annular ring covering the buckets of the turbine; the circular band *i* between the chutes and buckets can be raised or lowered for the purpose of regulating the size of the openings of the chutes. The turbine is surrounded by a cylinder *j*, which has a horizontal annular flanch *k*; *j* has openings all round corresponding to the discharge openings of the buckets, and similarly bevelled off. (See fig. 2.) The inside of ring *k* is provided with teeth in which the little wheel *m* can be made to gear by lowering it; and then by turning the hand-wheel *n*, the cylinder *j* can be turned so as to shut more or less the discharge openings of the buckets.

Claim.—The method of regulating the discharge openings of the buckets from the outside, in combination with the central gate *i*, for adapting the wheel to varying heads of water, and to the nature and amount of work to be done by it, consisting of the circular gate *j*, constructed, arranged, and operated with the wheel.

No. 10,081.—James A. Woodbury, of Winchester, Mass., and Joshua Merrill and George Patten, of Boston, Mass.—*Improvement in Air-Engines.*—Patented October 4th, 1853.

The main feature of this improvement consists in taking into the air-pump dense or compressed air (so as to exert a greater pressure than atmospheric air) in commencing to operate the engine.

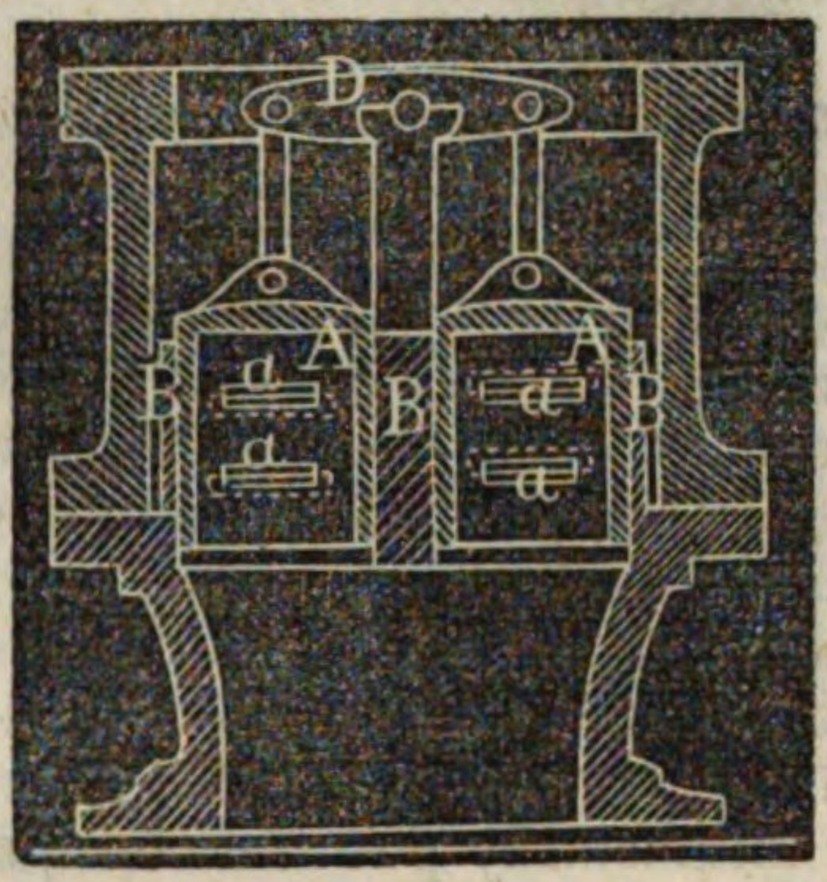
Claim.—In this improvement in atmospheric-air engines, supplying the air-pump from a receiver, into which air has been condensed by a hand-pump, auxiliary engine, or otherwise (the hand-pump or auxiliary engine being used for the purpose of charging and sustaining a uniform pressure in the receiver, from which the air-pump is supplied), when the same is done in combination with a second receiver, into which the air is to be still more compressed, and maintained at a uniform pressure, or nearly so, by the application of heat to the air on its passage to the working cylinder.



No. 10,082.—Elizur Wright, of Boston, Mass.—*Improvement in Stop-Cocks.*—Patented October 4th, 1853.

Claim.—The combination of a ball *e*, with an elastic cylindrical ring-seat *d d*, constructed with or without a wire, for the purpose of forming a valve.

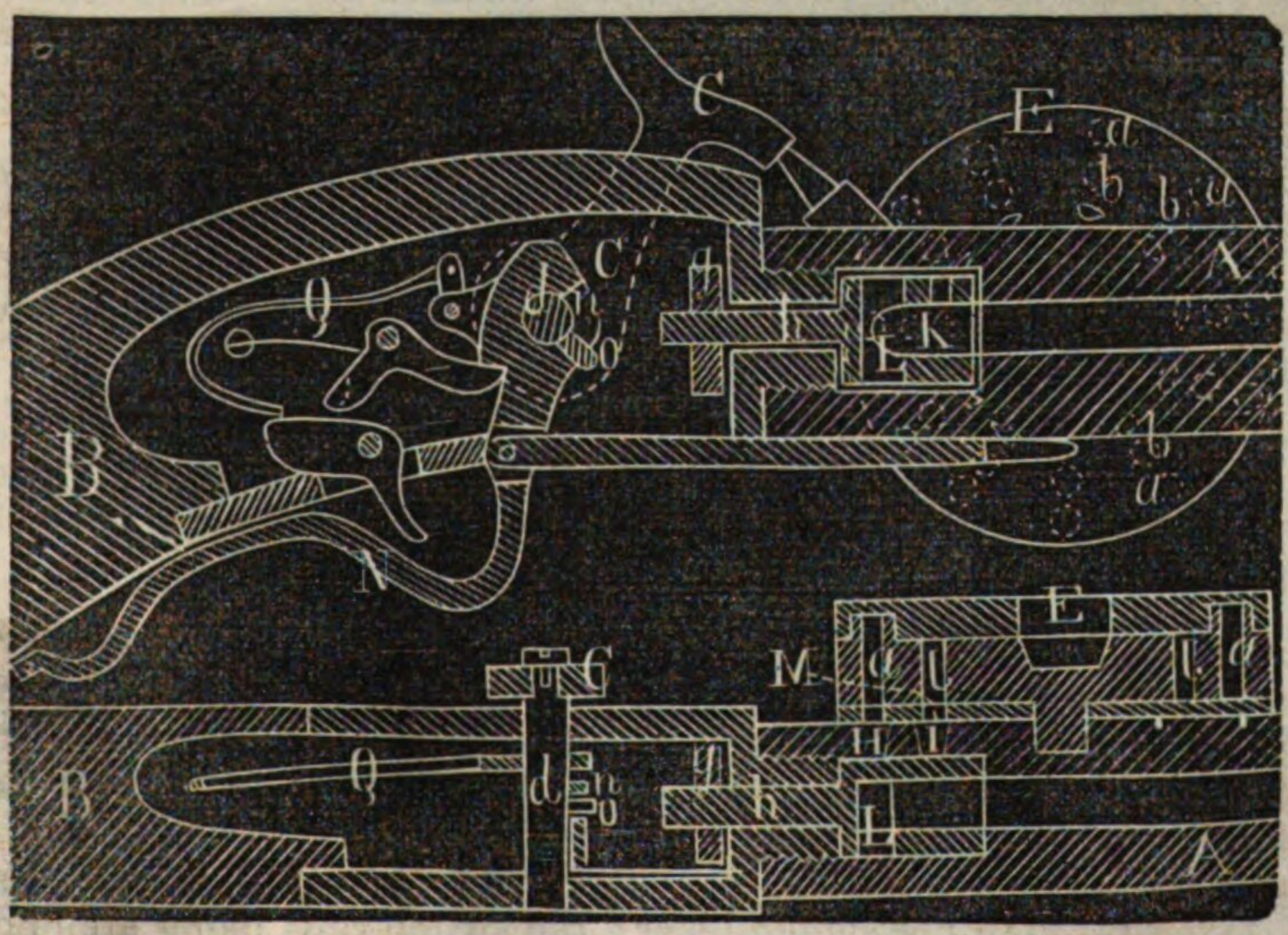
No. 10,083.—JOHN E. ANDERSON, of New York, N. Y.—*Improvement in Regulator-Valves for Steam-Engines.*—Patented October 4th, 1853.



The nature of this invention consists in the employment, as a throttle or regulator, in connection with a governor, of two cylindrical valves, constructed, arranged, and operating in such a manner that they will at all times balance each other perfectly, and that their effect upon the engine will be varied by an extremely slight movement. The object of the invention is to produce a valve which will work with very little friction, will wear correctly for a long time, and will be very sensitive to the slightest changes in the operation of the governor.

Claim.—The combination, to serve the purpose of a throttle-valve or regulator, of two hollow cylindrical valves A A, connected with a lever D on opposite sides of its fulcrum, and having slotted openings *a a* corresponding with similar openings in the cylindrical valve-seats B B, the several openings being arranged in the manner substantially as specified.

No. 10,084.—EDMUND H. GRAHAM, of Biddeford, Maine.—*Improved Magazine Gun.*—Patented October 4th, 1853.

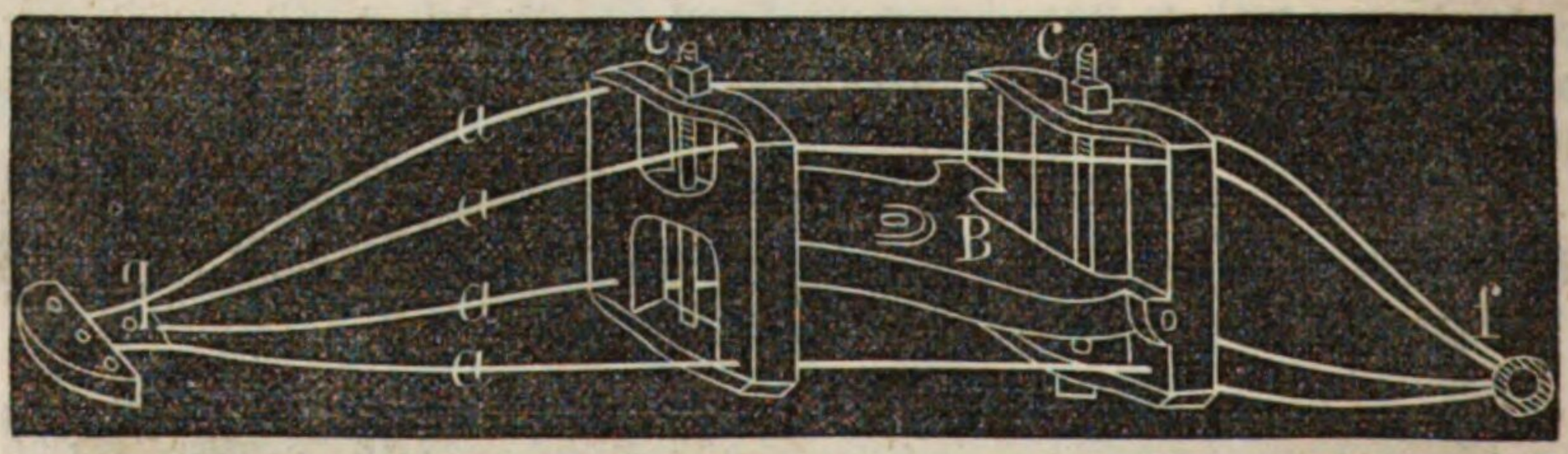


By depressing the trigger-guard N, the charge-receiver K and magazine E are simultaneously rotated, the former far enough for the reception of the charges of powder and ball, or shot, and the latter so as

to carry a load of such powder and ball, or shot, directly into line with the connecting-passages I and H of the barrel. By turning the gun a little, the load will pass from the magazine into the charge-receiver through passages L and M.

Claim.—The arrangement of the series of ball-chambers *b b b*, &c., and the series of powder-chambers *a a a*, &c., in concentric circles, and on the side of the gun-barrel, and out of the sight-range, and so as not only to revolve and work against a common plate E affixed to the side of the gun, but to operate in conjunction with a rotary charge-receiver K placed within the barrel; such arrangement of the magazine of chambers not only causing the powder of the charges to be kept in separate chambers, so as to lessen the danger of accidents, but causing the magazine to be so arranged as to be out of range of the sight in taking aim. Also, to so combine the percussion-hammer or cock, the rotary charge-receiver, and the rotary magazine with the trigger-guard, that by the movement of the guard away from the stock they may be simultaneously put in motion, and the hammer brought up to full cock.

No. 10,085.—LEVI B. GRIFFITH, of Honeybrook, Pa.—*Improvement in Plough-Beams.*—Patented October 4th, 1853.

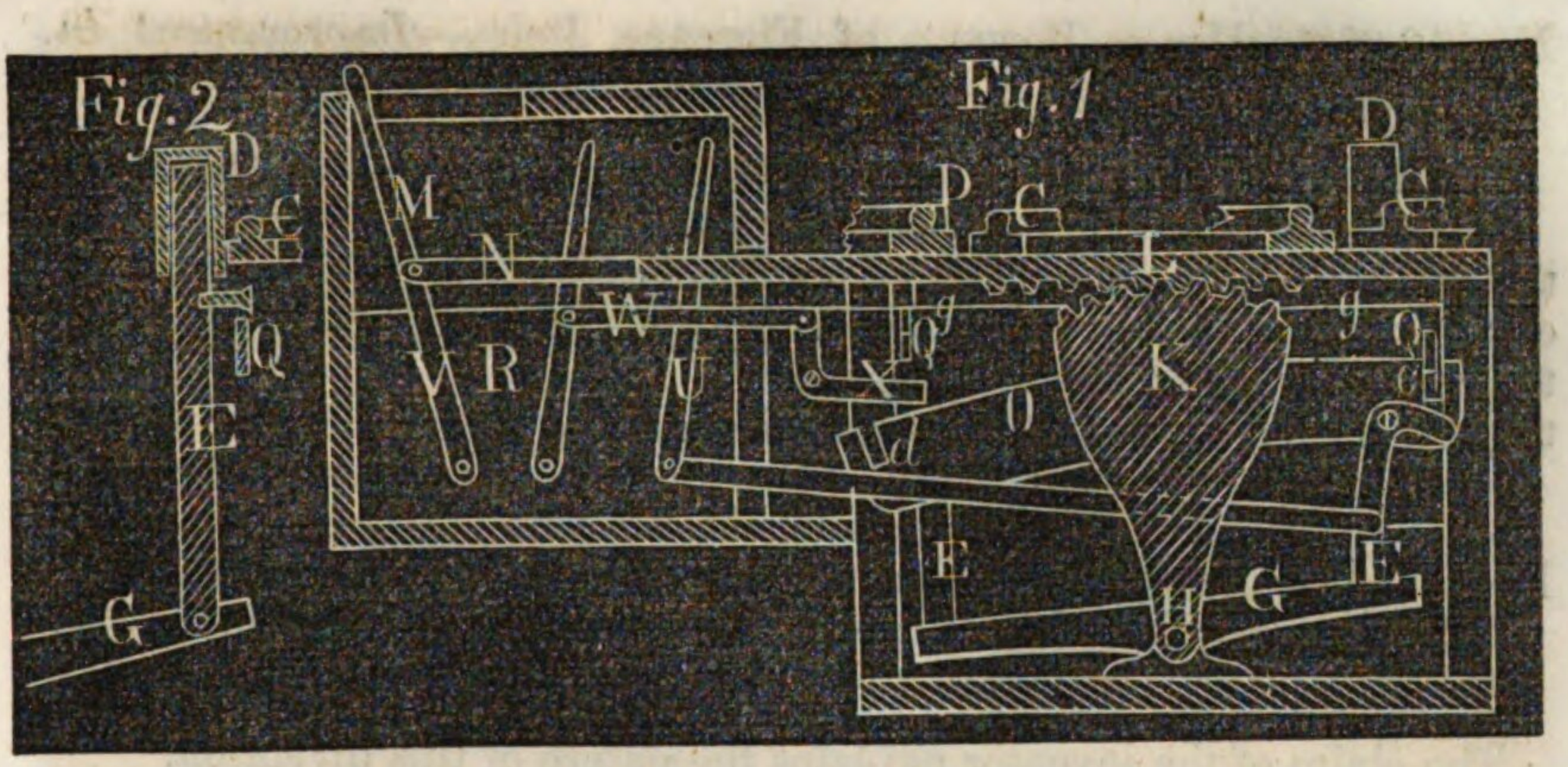


The rods *a a a a* are welded together at *q*.

Claim.—Constructing a plough-beam of four round iron rods *a a a a*, centre-piece B, and clamps *c c* in combination, the rods being of uniform size from end to end, curved to the shape specified, and welded together at the places designated, the centre-piece and rods being held firmly in their position by the clamps.

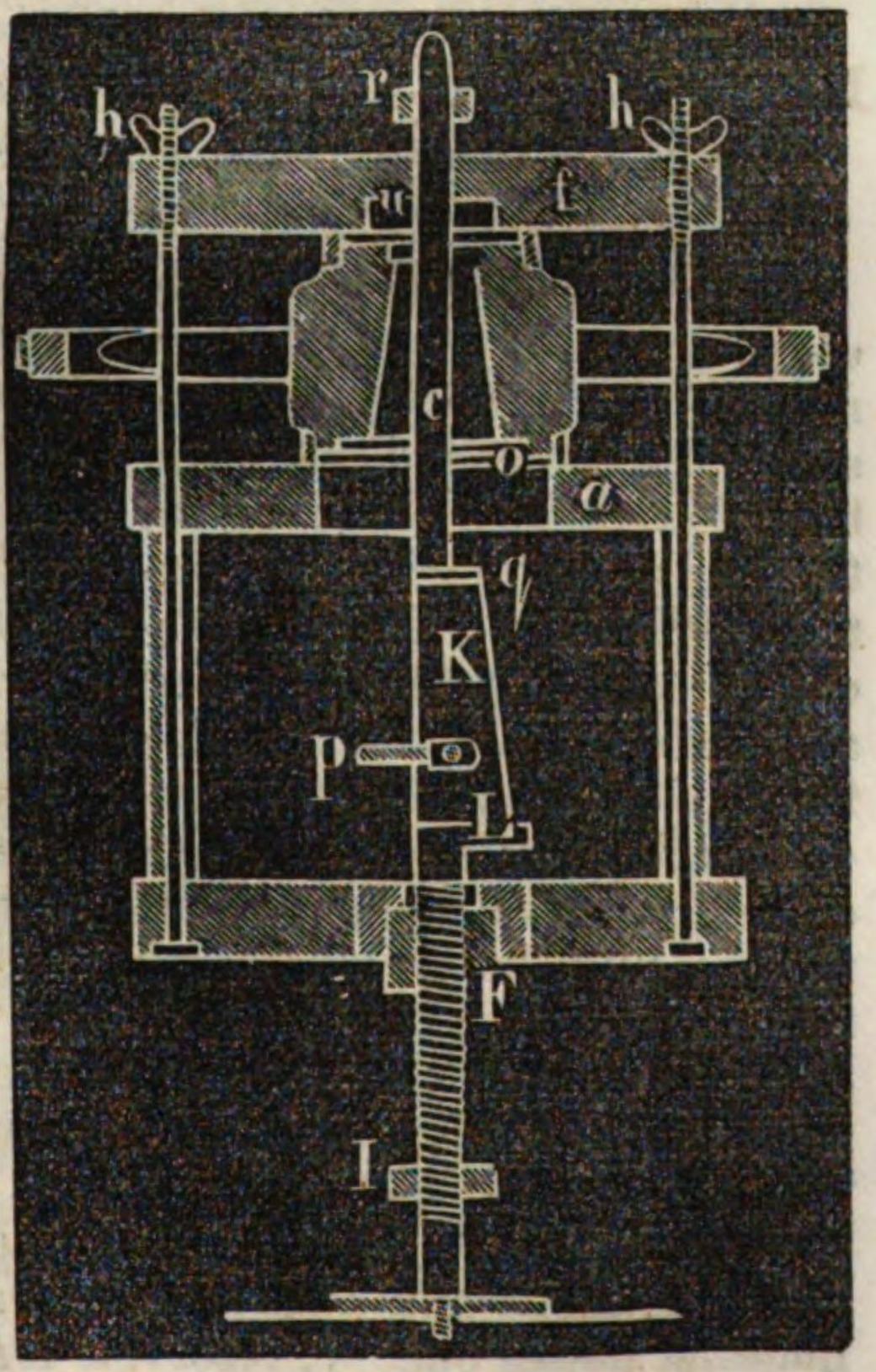
No. 10,086.—ARCHIBALD S. LITTLEFIELD, of Portland, Me.—*Improvement in Safety-Switches for Railroads.*—Patented October 4th, 1853.

The principal object of this invention is to enable a moving car or train to bring into alignment with a main or sidling track a switch that may be out of engagement with that one thereof on which such car or train may be moving towards the switch, and this in order to prevent accident, or running off the track, which must otherwise result to the car or train. The figure represents a transverse, vertical, and central section, taken through the switch-lever; the switch-rails being applied to the main-track and turnout rails, so as to be capable of having a movement into or out of alignment with one or the other, as the case may require.



Claim.—The combination of the transverse rocker-lever G, the shaft H, the toothed sector K, and the rack L, as applied to the switch, and the main and turnout tracks. Also, in combination with the toothed sector, the locking-plate O, provided with notches, the same being for the purpose of locking the switch.

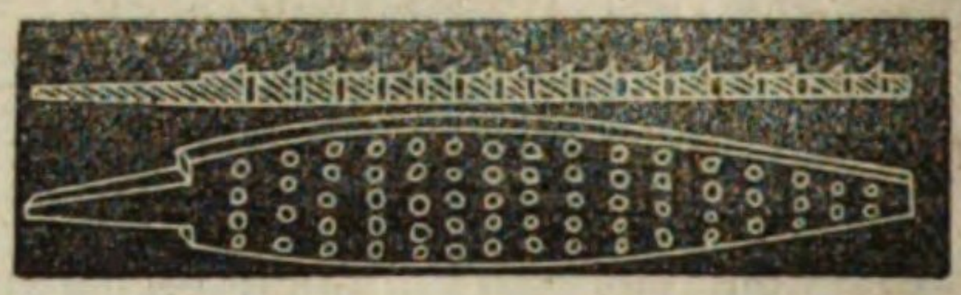
No. 10,087.—LEONARD S. MARING, of Westport, Mass.—*Improved Machine for Boring Carriage-Hubs.*—Patented October 4th, 1853.



The wheel is placed with one end of its hub on the middle of bar *a*, the shaft c being inserted and fixed in a bench or floor, and made to stand vertically and pass through the hole in the hub of the wheel, and the bar *f* brought down upon the upper end, and forced down upon it by setting down the screw-nuts *h h*. The clamp-screw H is then unscrewed so as to unclamp the screw-nut F from the frame, in order that the frame may be put in revolution on the said nut. By adjusting the slide *r* on the shaft *c* to the proper position, the descent of the cutter into the top of the hub will be arrested, when the top of the bar *f* is brought up against the slide *r*.

Claim.—Combining the backer *p* with the shaft *c* and the knife K, for the purpose set forth.

No. 10,088.—Hiram Powers, of Florence, Italy.—*Improvement in making Files or Rasps.*—Patented October 4th, 1853.



See figure.

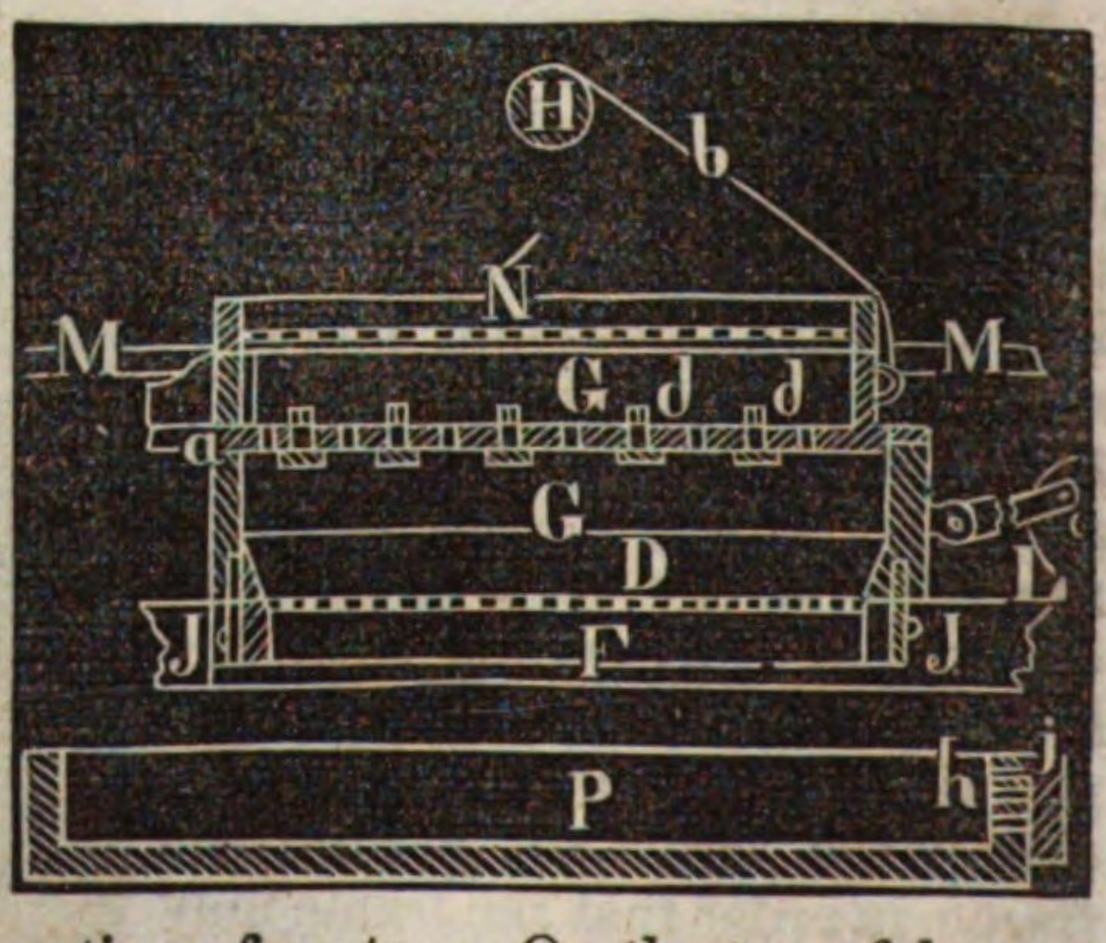
Claim.—The forming of perforations or throats to the cutting edges of files or rasps, for allowing the particles cut away to pass through, and to prevent the instrument from clogging or choking.

No. 10,089.—Philip P. Ruger, of New York, N. Y.—*Improvement in Machines for Turning Spiral Mouldings.*—Patented October 4th, 1853.

The claim of the inventor explains the nature of this invention.

Claim.—Combining with a rotary progressive motion of the article to be cut (of any desired configuration) a series of cutters placed around the article, to form and complete the pattern upon the article, the cutters being made to revolve in a stationary frame perpendicular to the axis of motion of the article to be wrought, either in a radial line or somewhat inclined thereto, so as to form the desired figure and undercut to any extent desired.

No. 10,090.—John H. Ward, of Sonora, Cal.—*Improvement in Machines for Washing and Separating Gold.*—Patented October 4th, 1853.

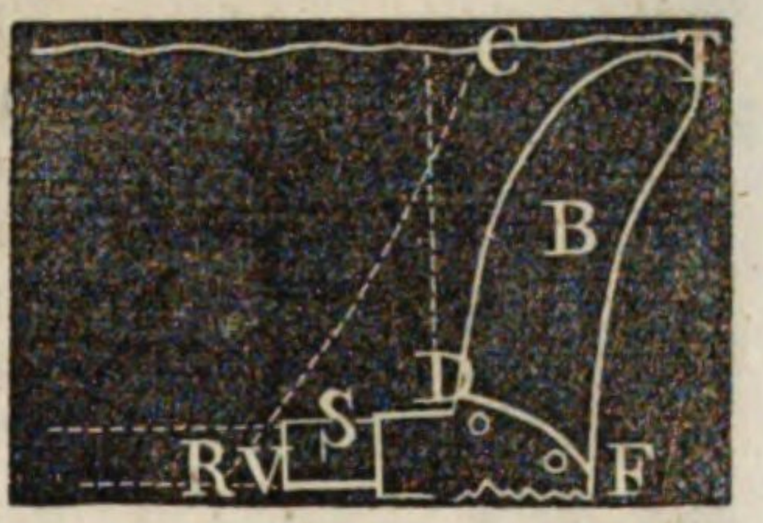


The nature of this invention consists in the method of arranging the several parts one above the other, and operating them so arranged, as to perform the whole washing and separating process in a compact machine, easily transported, and at great saving of water. (See figure.) Wheel L gives a reciprocating motion to the boxes G and G′. The studs *d d* are for the purpose of separating the material by the friction on them, in combination with the action of water. On the top of box G′ is a pan N, with a perforated bottom, through which the water enters. The pan N slides on ways M M, and can be run out if box G′ is to be filled or emptied. The second operation is performed by box D, with its perforated bottom. F is an apron over which the heavier material passes out. P, reservoir for the finer particles to settle, while the water gradually passes out through holes *h* when the slide *i* is withdrawn.

Claim.—The employment of the reciprocating perforated box or

trough armed with cutters or breakers, in combination with the sieve and decanting trough, arranged beneath the reciprocating trough. Also, the percolating plate arranged above the same.

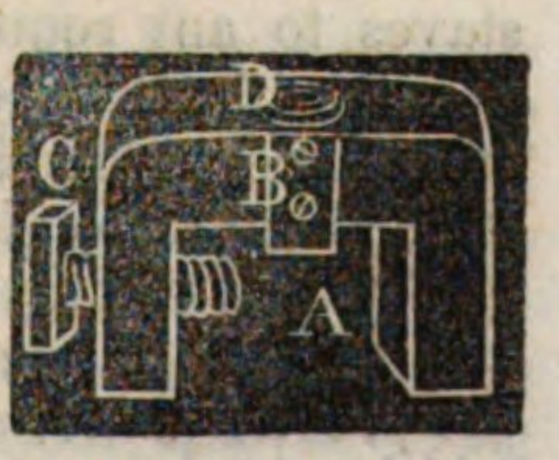
No. 10,091.—CHARLES T. P. WARE, of New York, N. Y.—*Improvement in Propellers.*—Patented October 4th, 1853.



The blades are constructed of india-rubber or the like material, in combination with elastic ribs, or with inflexible parts, and are attached to the shaft or shafts. The dotted curves C R represent the vessel's counter; B represents a blade in a certain position relative to the shaft S; the blade, decreasing in thickness from its point of junction with the shaft at D towards every point of its outward and inner boundaries F T and D T, has its inner boundary D T much stiffer than F T, so that it shall yield much less to the resistance of the water than the outer boundary F T. The shaft passing into the vessel at V, is acted on by alternate partial revolutions. While D T retains a stiffer bearing against the resistance of the water, the blade presses upon the water obliquely like the blade of a screw, the angle accommodating itself to the amount of such resistance, which of course is greatest towards the tip T, so that the blade being forced round with great velocity, the tip, according to its degree of flexibility, will tend to be drawn through the water edgewise, exerting but very little if any power of propulsion. But at the point where the blade commences its return sweep, the checking of the momentum gained by the previous sweep causes the combined forces of such momentum and of the motive power applied, to accumulate, as it were, at the extremity of the blade, and down along the outer boundary towards the shaft, before it can again be drawn through the water, by being thrown backward in a direction parallel to the shaft. This mode of construction combines the propulsive action of the paddle and the screw.

Claim.—A propeller having one or more blades, the front and rear edges of which are of unequal stiffness, these blades being arranged upon an oscillating shaft, and operating substantially as set forth.

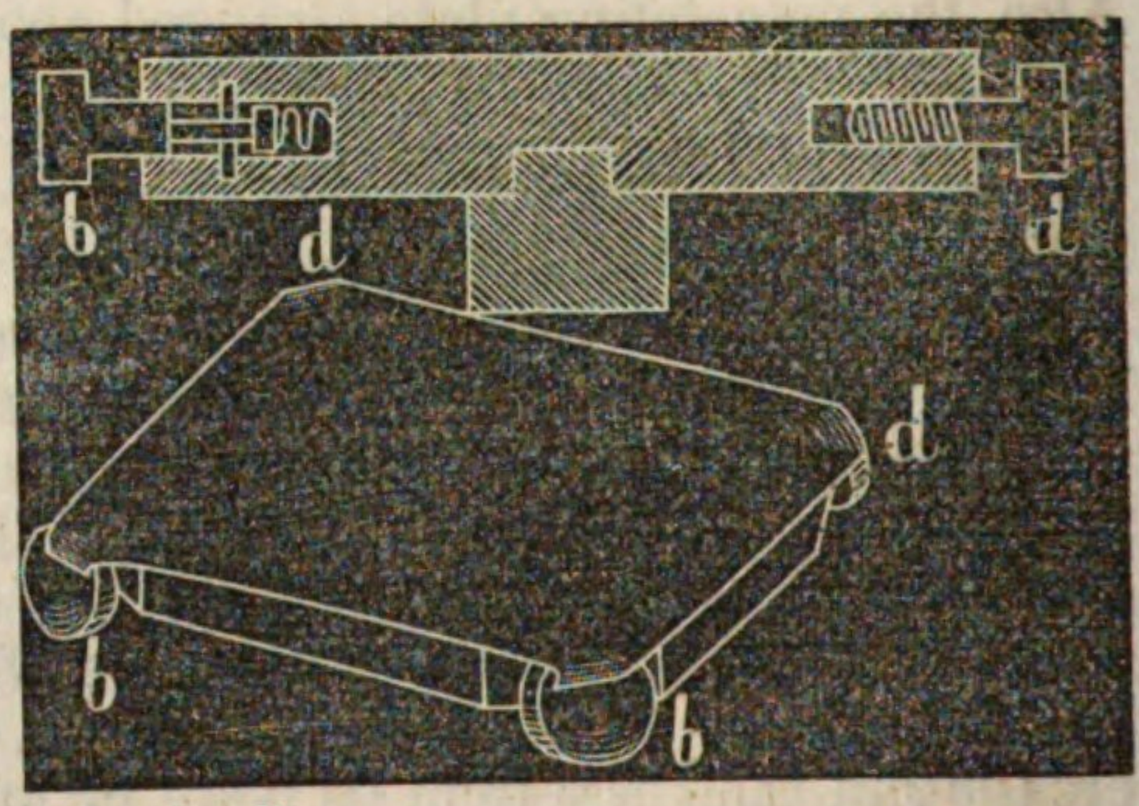
No. 10,092.—WILLIAM C. DEAN, of Jacksonville, N. Y.—*Improved Guide for Dowelling Felloes for Wheels.*—Patented October 4th, 1853.



The end of the felloe is inserted at A; on each side of groove A is a guide B, and on one side a set-screw C to fasten the felloe with; in the centre of the groove is a metallic tube D running through to guide the bit when boring for the dowel. The object of this guide is to prevent the grain of the wood from drawing the bit.

Claim.—The combination and arrangement of the tube, guides, and set-screw, for the purpose of holding the wood and guiding the bit.

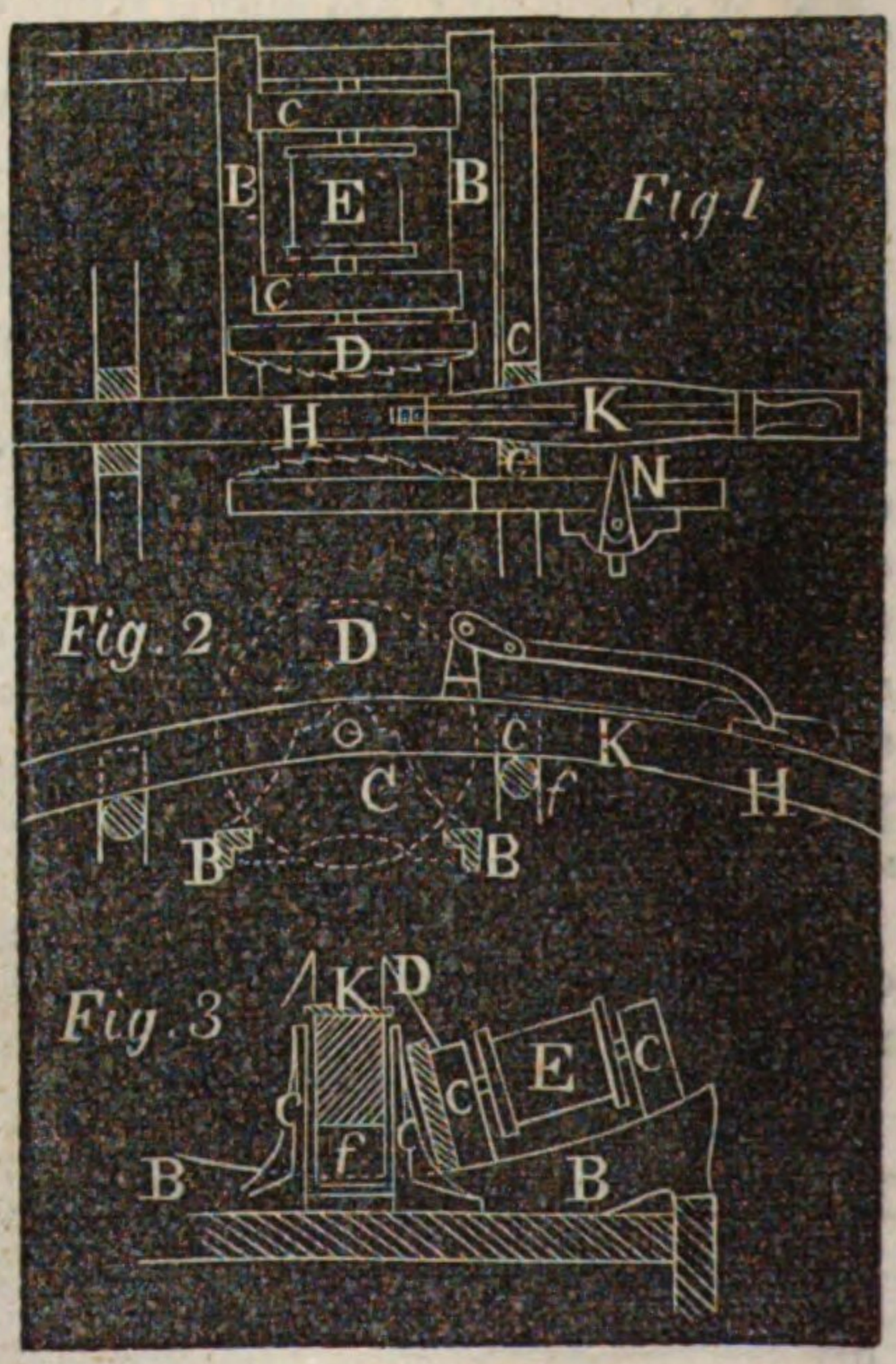
No. 10,093.—MARSHALL FINLEY, of Canandaigua, N. Y.—*Improved Daguerreotype Plate Holder.*—Patented October 4th, 1853.



The figure and claim illustrate and explain this improvement.

Claim. — Constructing a solid daguerreotype plate holder, or block, having fastenings at each corner made by spiral springs, in combination with tightening bolts having concave heads, into which the bent or turned corners of the plate to be buffed are hooked, so as to admit of a uniform buffing.

No. 10,094.—CHARLES B. HUTCHINSON, of Syracuse, N. Y.—*Improved Machine for Jointing Staves.*—Patented October 4th, 1853.



Claim.—The use of the circular guide-ways in combination with the movable piers, and the cams, or levers, or other suitable means of moving the same simultaneously and equally along the circular guide-ways, so that the saws or other cutters may be instantaneously adjusted for any required width of stave, without stopping their motion or changing their direction towards a constant central point. Also, the use of the wing or leaf-gauge N, in combination with the index moving over a graduated arc or dial, both moving in connection with the saws, so as to indicate at a glance the width between the saws, and to guide the operator in setting the stave on its bed-plate, and in adjusting the saws. Also, the mode of jointing staves to any required bilge and bevel, without bending or springing them, by rotating them endwise in a plane perpendicular to their width, between saws or other cutters so inclined as to give the correct bevel, whether adjustable as above or not, said rotation being upon a circle or other proper curve, such as to present each part of the stave to the action of the inclined cutters at the precise point or height requisite to give it its exact proportionate width or bilge; the rotation being obtained by means of a central arch-piece moving over rollers about a constant centre of motion, substantially as described.

No. 10,095.—I. Augustus Roth, of Philadelphia, Pa.—*Removing Chlorine from Bleached Fabrics.*—Patented October 4th, 1853.

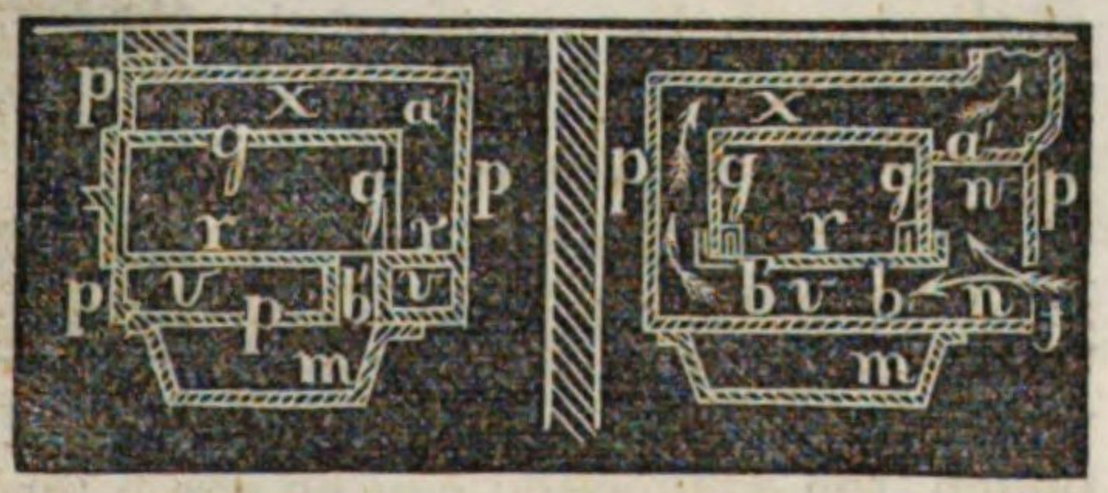
The inventor says that the strength of fabrics and the permanence of their colors are increased by removing the chlorine after they have been bleached. For this purpose he employs a solution to be applied to the fabric, which he denominates sulphite of soda (and is prepared by a process described in his specification).

Claim.—The process of removing chlorine from fabrics by means of the solution described in specification.

No. 10,096.—James H. Murrill, of Richmond, Va.—*Improvement in Looms for Weaving Coach-Lace, &c.*—Patented October 4th, 1853.

Claim.—The revolving pliers, operated by the spindle, whirl, connecting-rod, lever, and cams, in combination with the finger, wedge, and cylindrical stand, by which combination the needles upon which the pile is formed are seized, removed from the finished portion of the fabric, carried up, inserted under the colored warp selected by the jacquard for the figure, and released. Also, the construction of the stationary shuttle-box, having its front sustained by and movable about the projecting rod, so as to operate the ungearing apparatus upon a miss-throw of the shuttle, in the manner specified. Also, the combination of the sliding-reed with the stationary shuttle-box. Also, the combination of the notched wheel, rock-shaft, and arms, with the lever, spring, shaft, rod, and bar, for operating the ungearing apparatus when a derangement occurs in the machinery operating the needles. Also, the springs k, as arranged upon, in combination with the rods *d*, by means of which the strain upon the eyes of the harness is diminished.

No. 10,097.—John P. Hayes, of Boston, Mass.—*Improvement in Cooking Ranges.*—Patented October 4th, 1853.

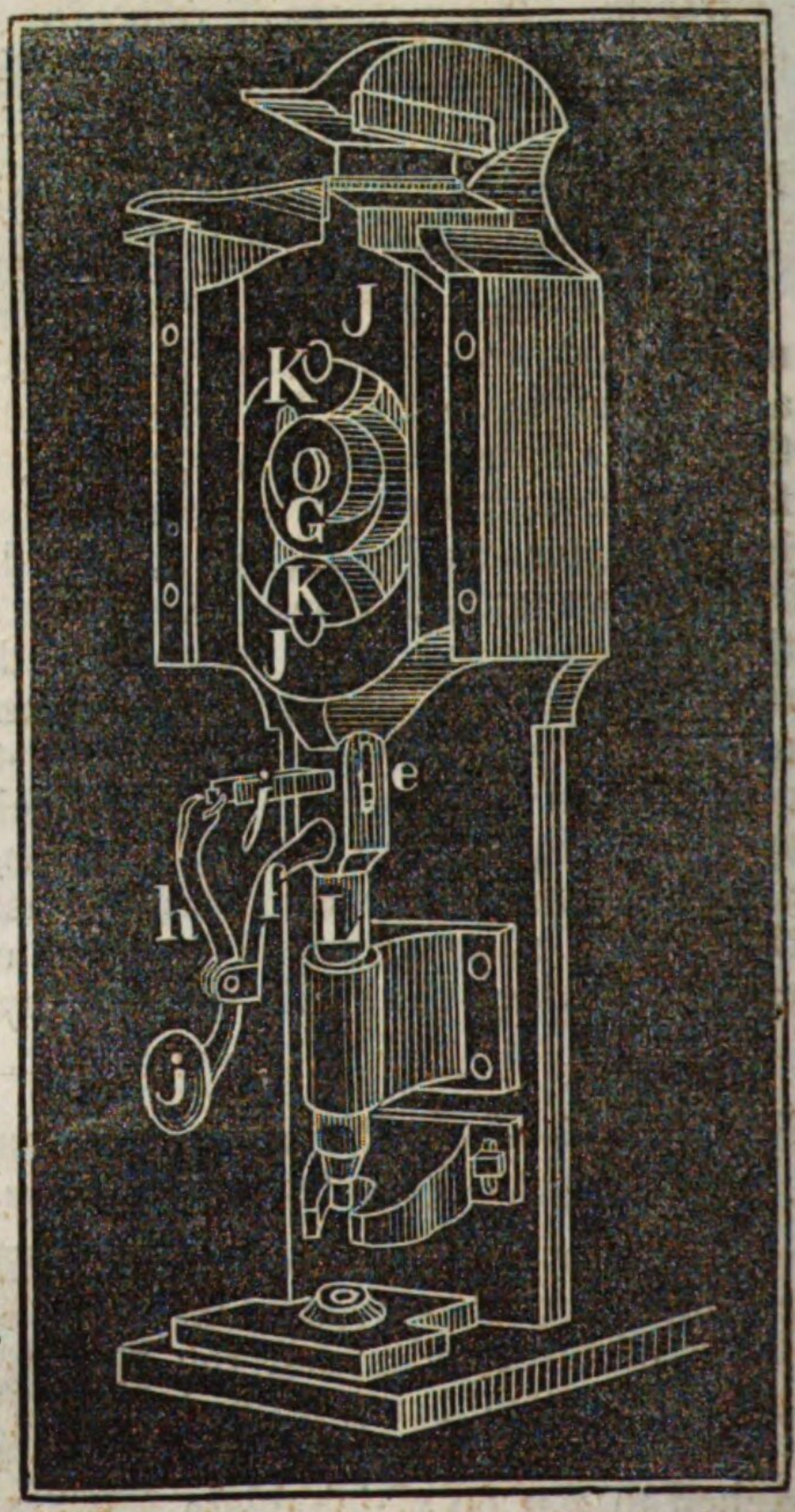


p p, outer casing of oven; *g g*, inner movable oven, composed of three sides and the top, the bottom being formed by the stationary plate *r* attached to *p p*, on which plate the oven can be moved in or out. The smoke, &c., of the fire-pot passes through aperture *t*, and then follows the direction indicated by the arrows into *v v*, *x x*, being made to pass round the oven by the partition *a*, which prevents it from passing directly into the smoke-pipe. The hot air is received from the chamber about the fire-pot into the receiving-flue *m*, and then passes through a box-flue *b' b'* into the oven. The object is to prevent the smell of any thing being cooked in the oven from passing into the hot-air chamber, and providing means whereby the odor may be carried off in the flues.

Claim.—The receiving or box flue *m m* formed under the oven for the purpose specified. Also, combining the movable oven, sliding

upon a stationary bottom, through which the hot air is admitted, with the smoke-flues about the same, so as to cause the smoke, &c., to pass about and over the oven, and the hot air to pass into the same.

No. 10,098.—O. J. DAVIE and THOMAS W. STEPHENS, of Erie, Pa.—*Improvement in Machines for Punching and Shearing Metals.*—Patented October 4th, 1853.



The nature of this invention consists in disconnecting the punch, or its stock L (see fig.), from the yoke J, by an automatic movement at each operation of the machine, by means of a weight *i* acting in connection with a wedge *j*, in which position the punch ceases to operate until the metal to be punched is properly in place, when, by a slight touch of the operator upon the rising of the punch, the connection between them is again made, and the punch is again thrown into operation, by this means allowing the machine to continue in motion, whilst the punch is only brought into action when required. K K, friction and pressing rollers; G, eccentric.

Claim.—Disconnecting the punch-stock from the machine automatically at each operation of the punch, by means of the weighted lever and key or their equivalents, for the purpose of affording the operator time to place his sheets, without regard to the motions of the machine, when, by a slight movement of the ball or lever upon the rising of the punch, the connection can be again formed.

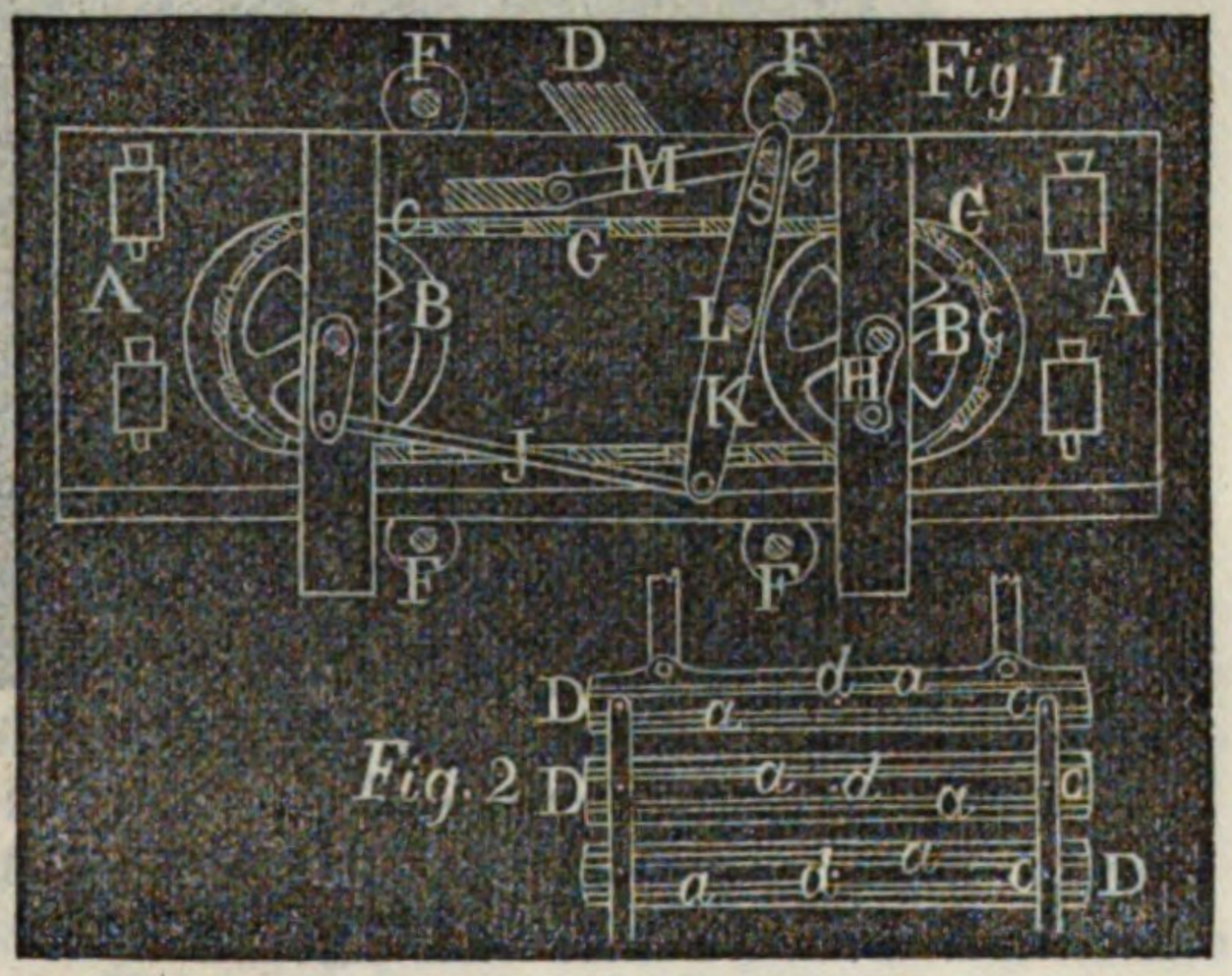
No. 10,099.—JOHN NEWELL, of Boston, Mass.—*Improvement in Camphene Lamps.*—Patented October 4th, 1853.

This improvement is fully set forth in the inventor's claim.

Claim.—Silvering the perforated metal or brass, copper, or iron wire-gauze, used in safety lamps and cans or other vessels designed to prevent explosions from the vapor of camphene, burning-fluid, &c., the silvering being applied for the purpose of preventing the corrosion of the metal or wire-gauze. Also, the introduction of perforations in the

caps of lamps used for burning camphene, burning-fluid, &c., so small as not to admit the communication of flame through them, for the purpose of allowing the escape of the vapor formed within the lamp from camphene, &c., and thereby preventing the bursting of the lamps by the pressure of the vapor.

No. 10,100.—Richard Pindell, of Fayette County, Ky.—*Improvement in Planing-Machines.*—Patented October 4th, 1853.



In frame A, two equal pairs of wheels B revolve, carrying the endless feeding and planing bed *c*, by the planes D. This bed is constructed of slats E, connected by hinge-joints, and has slight chisel projections, on which the plank is impressed by pressure-rollers F, as it is fed to the machine. The ends of these bars slide in grooves G in the frame, and are concave at their parts of contact with the wheels, to fit snugly thereon. The axle of one pair of wheels is adjustable to regulate the tension of the travelling-bed. The power is applied to the crank H. Tongueing and grooving knives can be attached to the machine on the side opposite the planes.

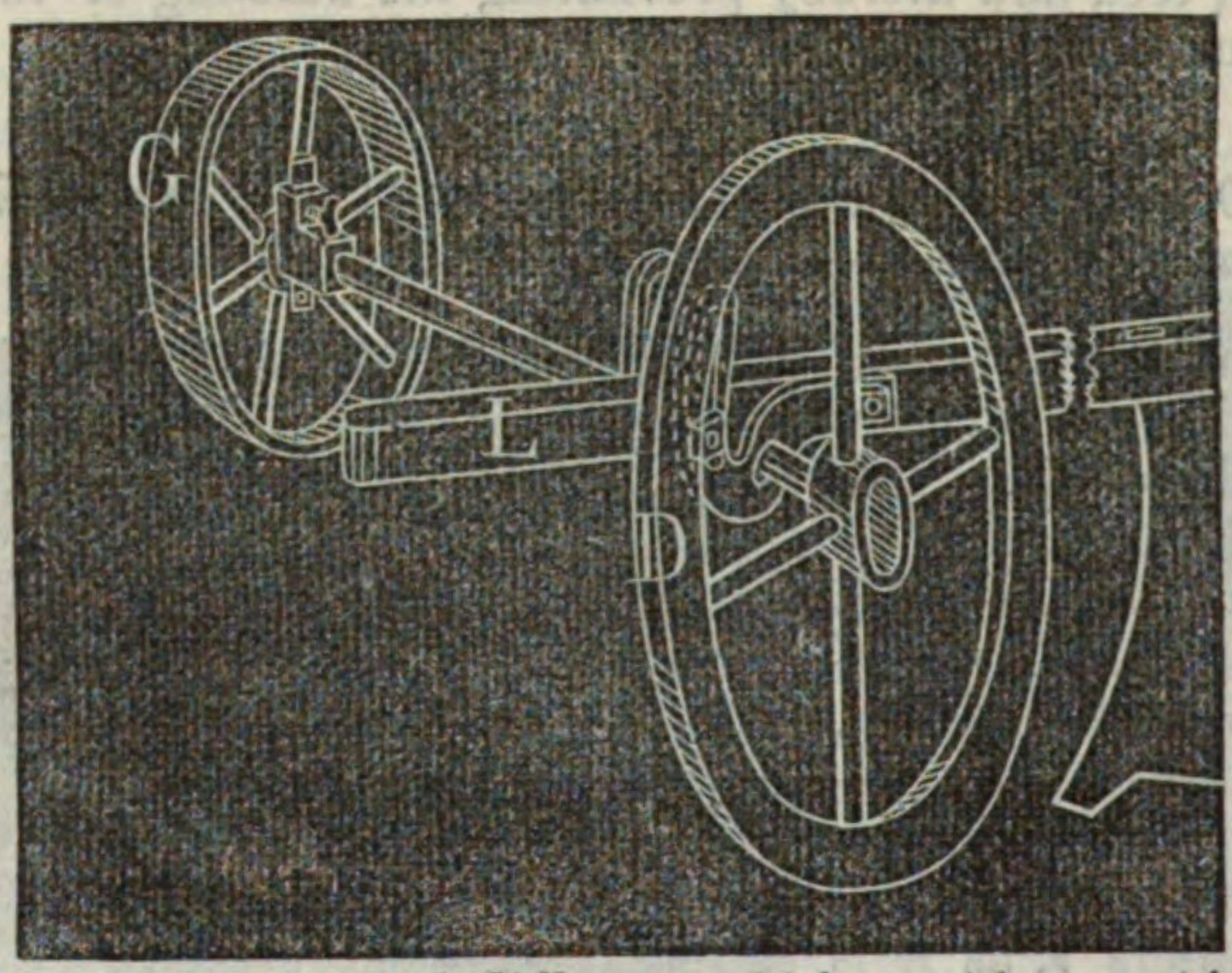
Claim.—The combination of the differential velocities of feed-motion and the motion of the knives; that is, when their relative speed is such that the knives shall cut on their back as well as on their forward motion. Also, giving to straight-edge planes for dressing lumber a partial reciprocating rotary motion about their own centre. Also, the yielding pressure-roller placed in front of the stocks, in combination with an endless planing-bed, for the purpose of feeding planks, &c., to the planes.

No. 10,101.—C. R. Brinckerhoff, of Batavia, N. Y.—*Improvement in Ploughs.*—Patented October 11th, 1853.

The width of the furrow is gauged by adjusting the wheel D to a greater or less distance from the beam L. Wheel G (on the land side) is provided with a slip-collar, so that the axle may be taken out of its supporter when necessary. This plough requires no holding, except when turning round, and can be attended by a boy.

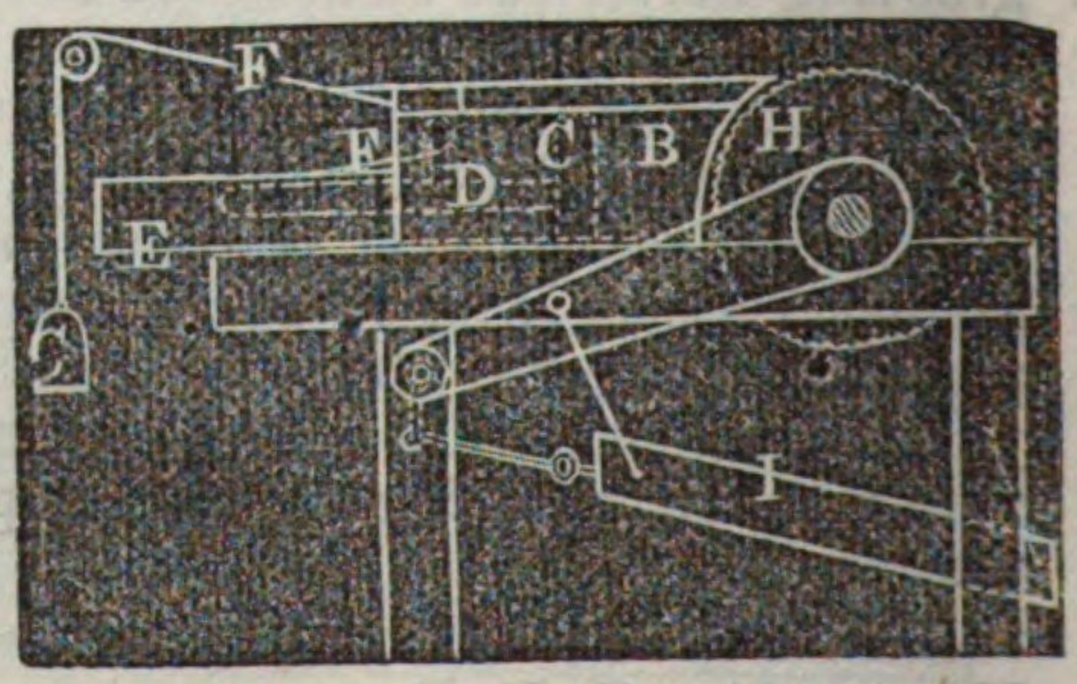
Claim.—Combining with the plough-beam, between the plough and the clevis, two wheels, one on each side of the beam, and of different diameters, the one resting in the furrow and the other on the land, for the purposes set forth. Also, making the tread of the furrow-wheel narrow, so that it may press lightly against the land, and gauge the

width of the furrow-slice, and cast aside any small stones that may roll against the land. Also, making the wheels, especially the furrow-wheel, adjustable in the direction of its axis, for the purpose of adapting its position to furrows of different widths. Also, making the furrow-wheel bevelling outward on the side which presses against the land. Also, making the small wheel adjustable vertically with reference to the shaft B and the large wheel.



No. 10,102.—H. P. BYRAM, of Louisville, Ky.—*Improved Machine for Cleaning Blue-Grass and other Seeds.*—Patented October 11th, 1853.

The nature of this invention consists in removing the chaff or hulls from the seed, by pressing and holding it up against an emery or sand wheel, by an unvarying pressure, whether the hopper be more or less full.



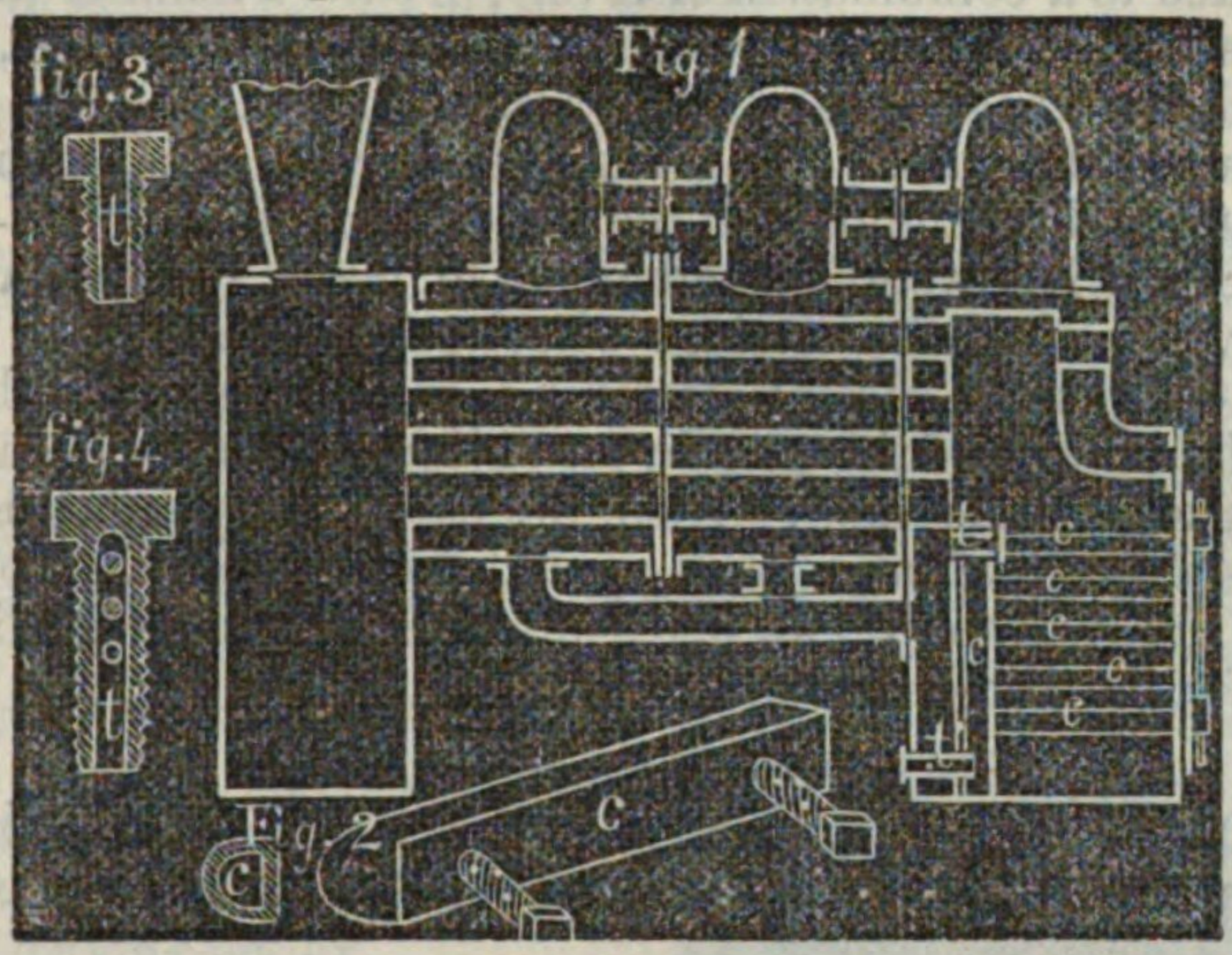
B, hopper; follower C fits close in said hopper, and its arm D is carried in guide E; cord F and weight G draw forward follower C, and thereby the seed is forced up to the sand-wheel H, with sufficient power for the wheel to cut away the chaff. The seed drops down on to the screen I.

Claim.—In combination with the rubbing or scouring wheel, the method of feeding up and holding against the wheel the seed to be cleaned, by a pressure which is unvarying, whether the hopper be full or not.

No. 10,103.—J. B. COLLAN, of Reading, Pa.—*Improvement in Steam-Boilers.*—Patented October 11th, 1853.

By reference to the figure, the claim will explain this improvement. Fig. 2 represents one of the D-shaped water-linings.

Claim.—A detachable lining for the sides and ends of fire-boxes of steam-boilers, consisting of one or more tubes connected with the ad-

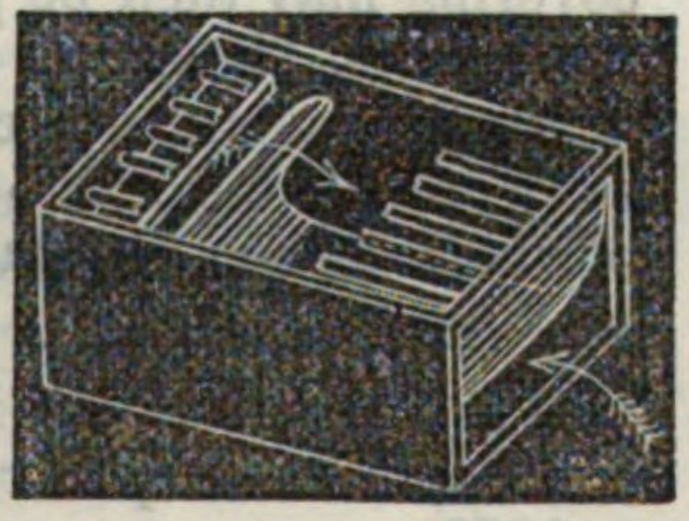


jacent water-space by means of hollow bolts or their equivalent, substantially as described, so as to admit of the ready removal and replacement of the tubes.

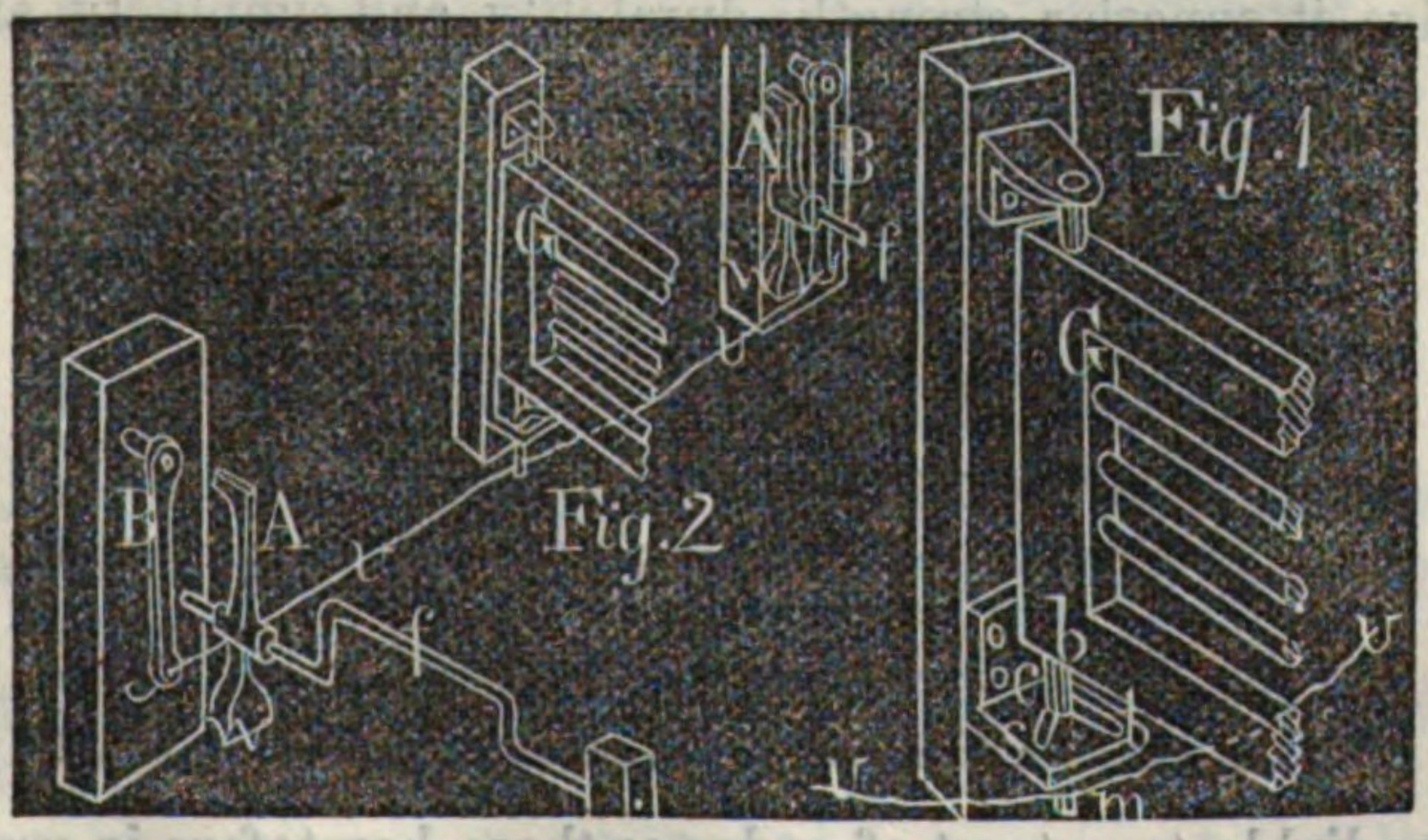
No. 10,104.—Gilman Davis, of Roxbury, Mass.—*Improved Ash-Pans for Locomotive Engines.*—Patented October 11th, 1853.

The arrows indicate the direction of the current of air.

Claim.—The taking in of the air in front of the ash-pan, and introducing it into the fire-box, in a direction opposite to the furnace-doors, to protect the firemen from the back-lash of the fire when the doors are opened.



No. 10,105.—S. G. Dugdale, of Richmond, Ind.—*Improved Apparatus for Opening and Closing Gates.*—Patented October 11th, 1853.



Pin *b* moves in grooves *s*, *c*, *t*; when the gate is shut it rests in *c*; when open, in *t* or *s*; the cord *v* is firmly connected to the lower end

m of pin *b*; at some distance from gate G, on both sides of it, the cord *v* is attached to a combination of levers, in such a manner that the gate opens as soon as the carriage-wheel strikes one of the levers, and stands open until the wheel strikes one on the other side of the gate, after having passed the gate. Fig. 2 shows the levers A and B on both sides of the gate, and *f* extends into the street, and the carriage-wheel is to pass over it. The weight *w*, attached to lever A, turns A so that it strikes lever B when the carriage-wheel passes over *f*.

Claim.—Opening, closing, fastening, and unfastening the gate, by moving the bottom of the gate in an oblique direction from and to the post upon which it is hung. Also, the use of the pendulous and vertical levers *f f* and *i i*, and arms *g g* and *h h*, in combination with the hinges of the gate, the whole being operated and arranged in the manner and for the purpose as above set forth.

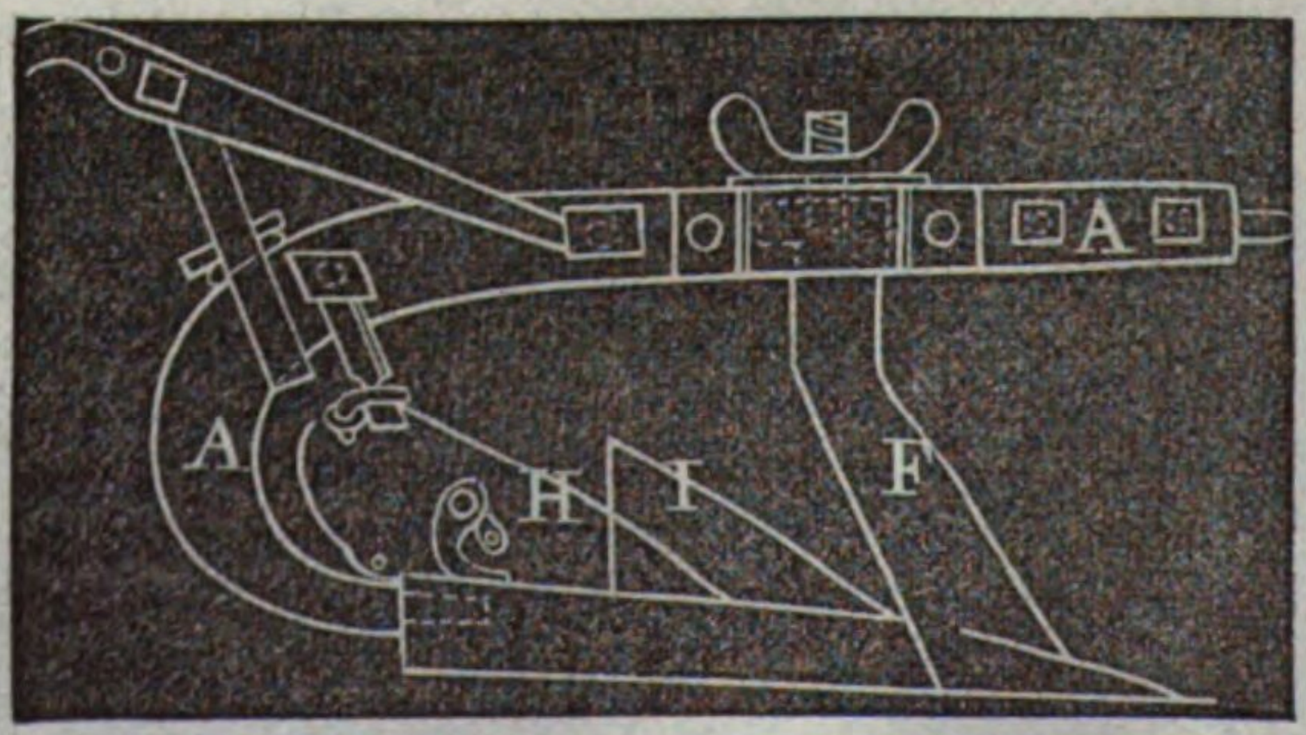
No. 10,106.—Charles Goodyear, of New York, N. Y. *Improvement in Coating Metals with Gutta-Percha.* Patented October 11th, 1853.

The nature of this invention consists in the application of "caoutchouc or gutta-percha," when mixed with pulverized sulphur (six or eight ounces of sulphur to one pound of gum), to the surface of metal. The article covered is subjected to a high degree of heat, from 260° to 300° Fahrenheit, from three to seven hours. The hard compound covering may then be polished and varnished.

Claim.—The art or method of coating articles composed wholly or partly of metal with compounds of caoutchouc or gutta-percha, and subjecting the same to a high degree of artificial heat, or the process of vulcanization, substantially as specified.

No. 10,107.—Nathan Harrison and John W. H. Metcalf, of Ridgeville, Va.—*Improved Hill-side Plough.*—Patented October 11th, 1853.

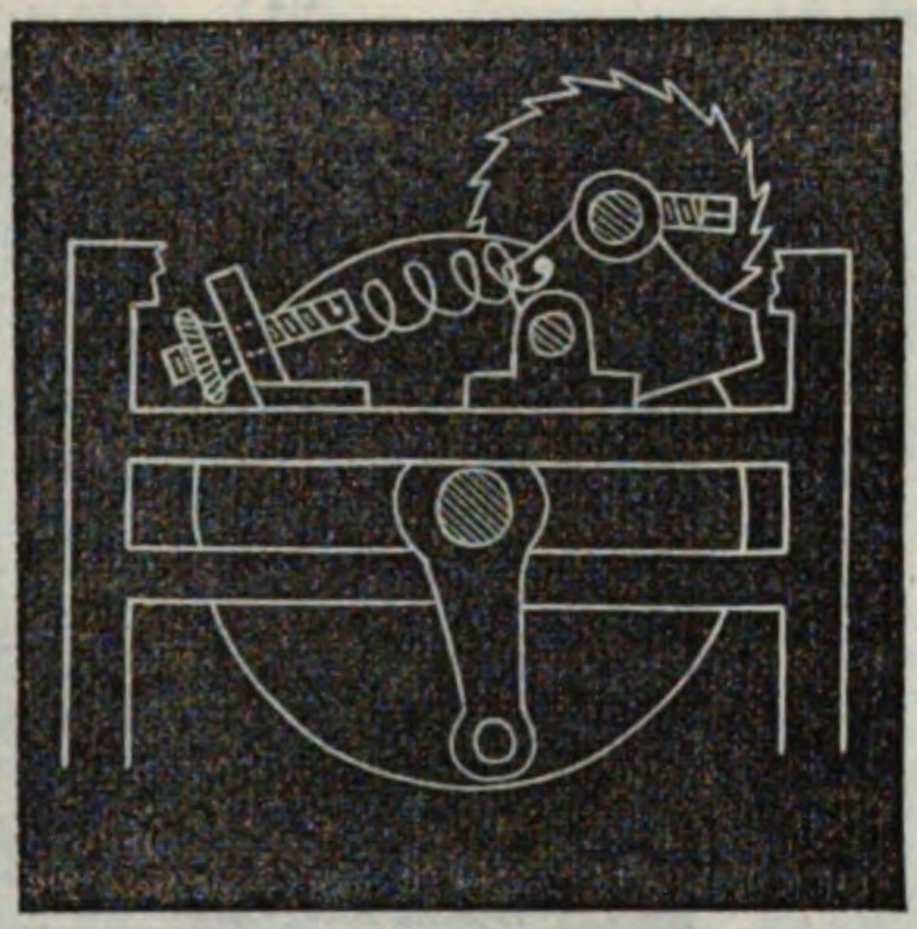
The nature of this improvement consists in so constructing the plough as to give it superior strength, durability, and simplicity, and render



it not so liable to get out of order as those heretofore in use. The entire plough is made of wrought iron, except the mould-board, which is cast.

Claim.—Curving downward and inward the beam A in the rear part, so as to cause it to support the rotary part of the plough, which it performs in combination with the standard.

No. 10,108.—Joseph Harris, Jr., of Boston, Mass.—*Machine for Driving Circular Saws.*—Patented October 11th, 1853.



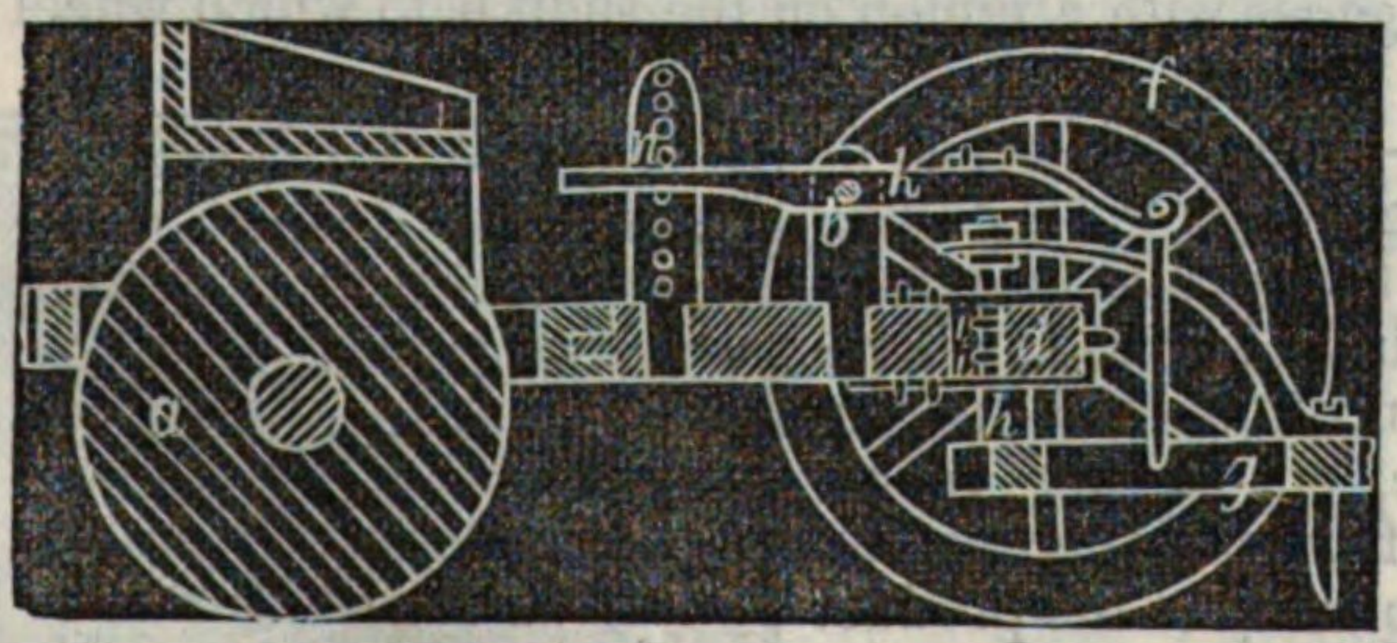
By reference to the annexed figure, the claim will show the nature of this improvement.

Claim.—The method of hanging the arbor-frame on journals, for its axis, each side of the driving-pulley bringing the axis of the arbor-frame within the circumference of the driving-pulley, or on a line passing through the driving-pulley, so that the act of feeding the stuff to the saw or cutter will press the arbor-pulley against the driving-pulley.

Also, hanging the arbor-frame on such an angle that the act of feeding the stuff to the cutter will press the arbor-pulley against the driving-pulley, in combination with a spiral spring, or its equivalent, for holding the arbor-pulley firmly against the driving-pulley.

No. 10,109.—Daniel Hill, of Bartonia, Ind.—*Harrow and Roller combined.*—Patented October 11th, 1853.

f f are a pair of wheels; *d*, the axis of the wheels; *a*, roller; *g*, harrow; *h h*, rods carrying the harrow, and sliding in staples *i i*. The object of this arrangement of the parts is to permit the harrow to accommodate itself to every inequality of the ground; *k* is a lever turning on pivot *b*, and adjustable by pin at *n*.

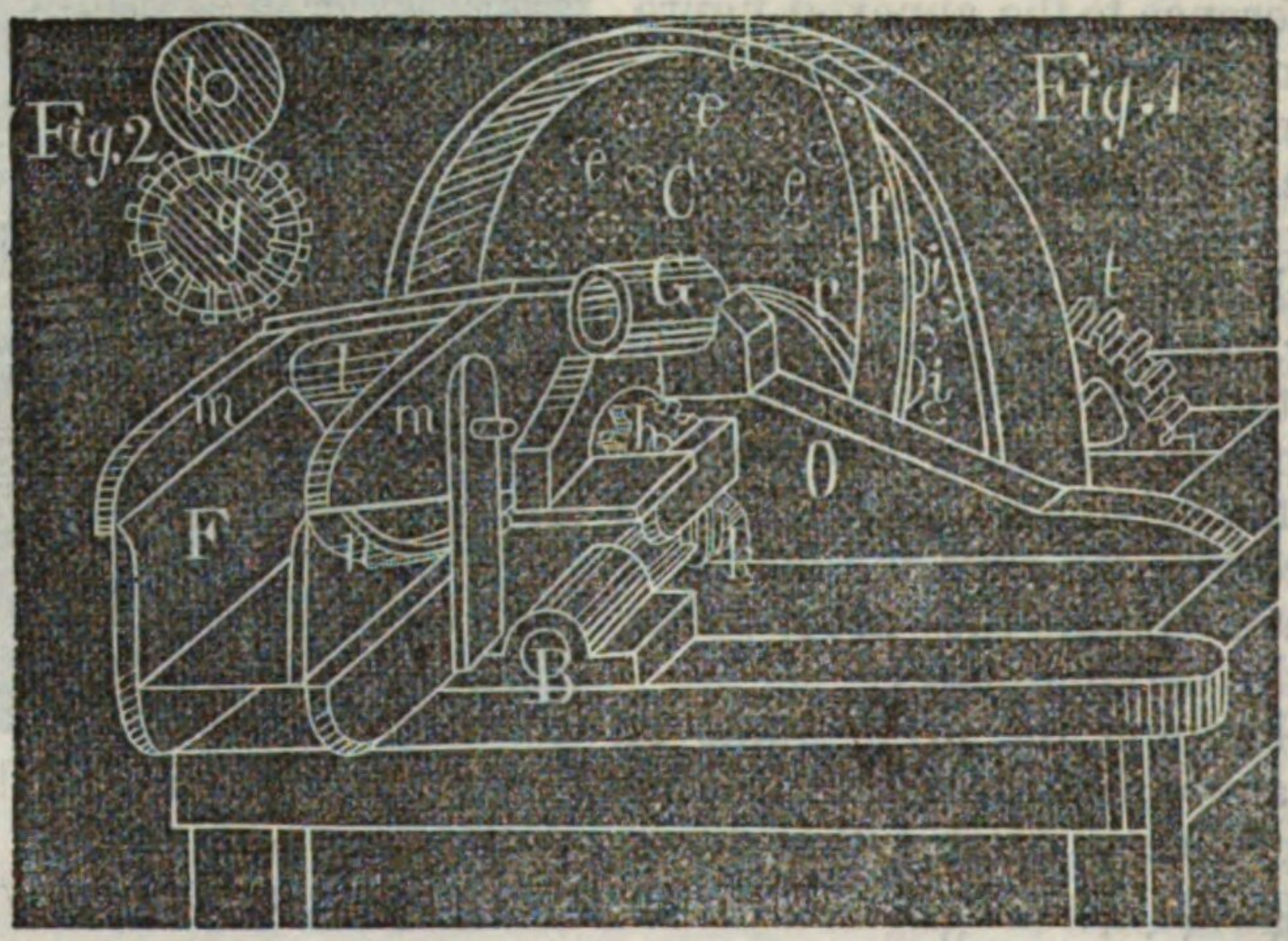


Claim.—The arrangement and mode of attaching the harrow to the forward axle of a roller, in the manner and for the purposes specified.

No. 10,110.—Thomas B. Jones, of Carloville, Ala.—*Improved Straw and Cob Cutter.*—Patented October 11th, 1853.

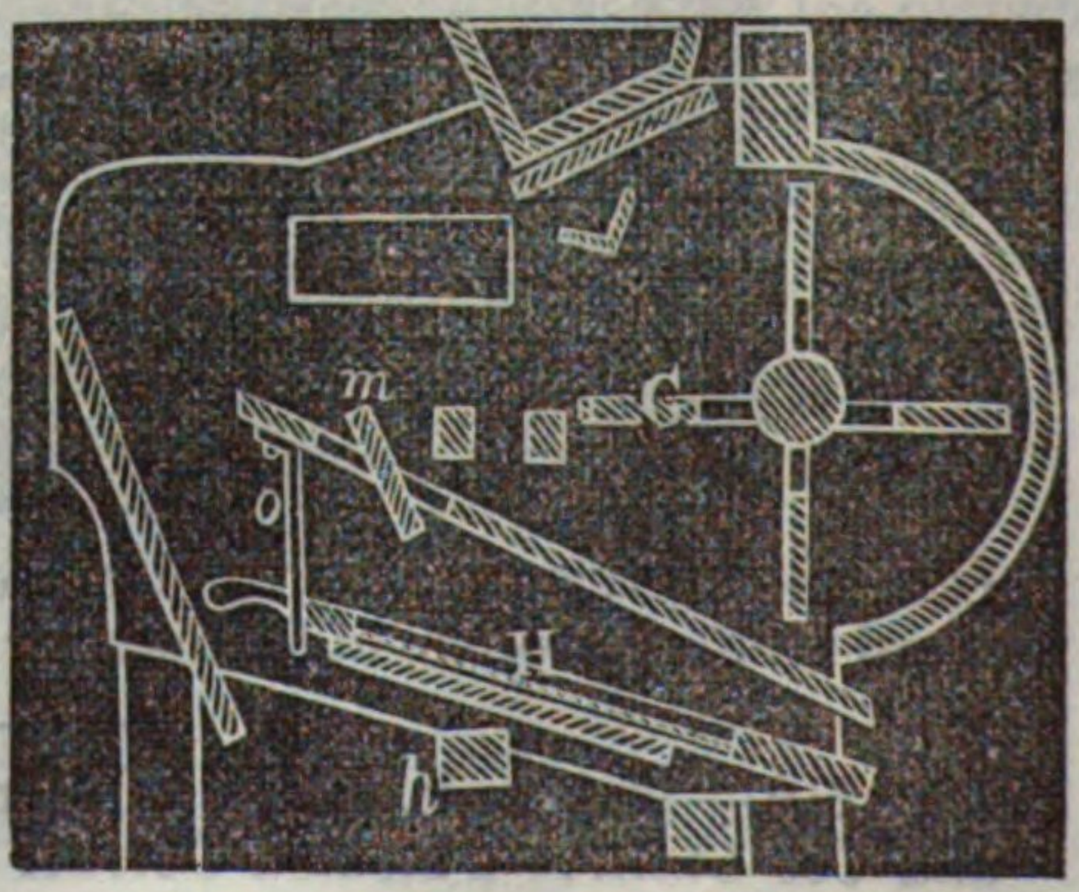
In fig. 1, B represents the shaft which supports the shelling and cutting wheel, which consists of a metallic disk C, with a series of

shelling teeth *e*, cast fast to its face; *d* is the rim of the disk, and it projects beyond the face and back, thus increasing its stiffness, and furnishing a support for the knives *f*. The inner extremities of the knives are made fast to the hub of the wheel, which also projects beyond the face and back; their outer extremities are made fast to the raised rim, and are supported at intervals by bosses *i i*, cast fast to the



disk. E is the feed-tube: the feed-trough F is secured to the back of the frame, for the introduction of the straw. The feed-trough is provided with a feed-roller *g* (fig. 2), which is toothed; and its gudgeon, which projects through the box, is fitted with a screw-wheel *h*, which has teeth that engage with the threads of screw *k*, on the shaft of the cutting and shelling wheel; *l* is a roller, supported above the first by frame *m*; the beam *o* supports, at its inner extremity, the trough F. G is an inclined feed-tube, for the presentation of corn-cobs to the action of the cutters; *r* is a ring-gauge, which limits the length of pieces cut. The wheel *t* engages with a pinion on the shaft B, to which wheel the power is applied.

Claim.—The combination of the feeding-trough F, its gauge-disk C, the tube G, and its gauge-ring *r*, with the knives *f*; whereby the same knife will, at the same time, cut fodder coarse and cobs fine, and thereby improve the quality of the product as feed for animals.



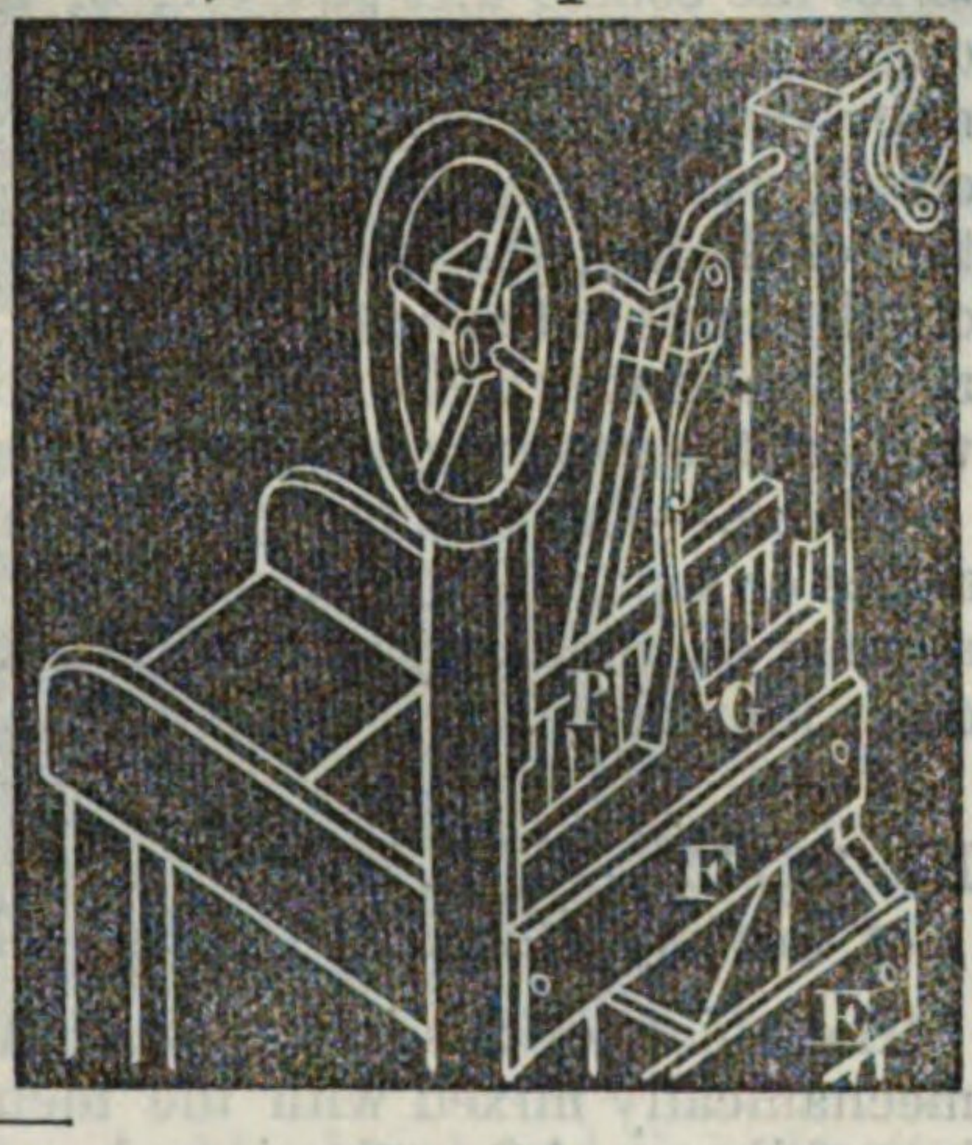
No. 10,111.—H. M. KELLER, of Newark, Ohio. — *Improvement in Fanning-Mills.*—Patented October 11th, 1853.

The front end of screen H can be raised or lowered by straps *o*, to let the grain pass off more or less rapidly; and the revolutions of fan-

wheel G are made to give an oscillating motion to the hopper, the riddle, and the screen H. The trap-door *m* is shut when no screening is necessary.

Claim.—The trap-door *m*, in combination with screen H, arranged and operated in the manner and for the purposes described in the specification.

No. 10,112.—J. J. PARKER, of Marietta, Ohio.—*Improvement in Straw-Cutters.*—Patented October 11th, 1853.

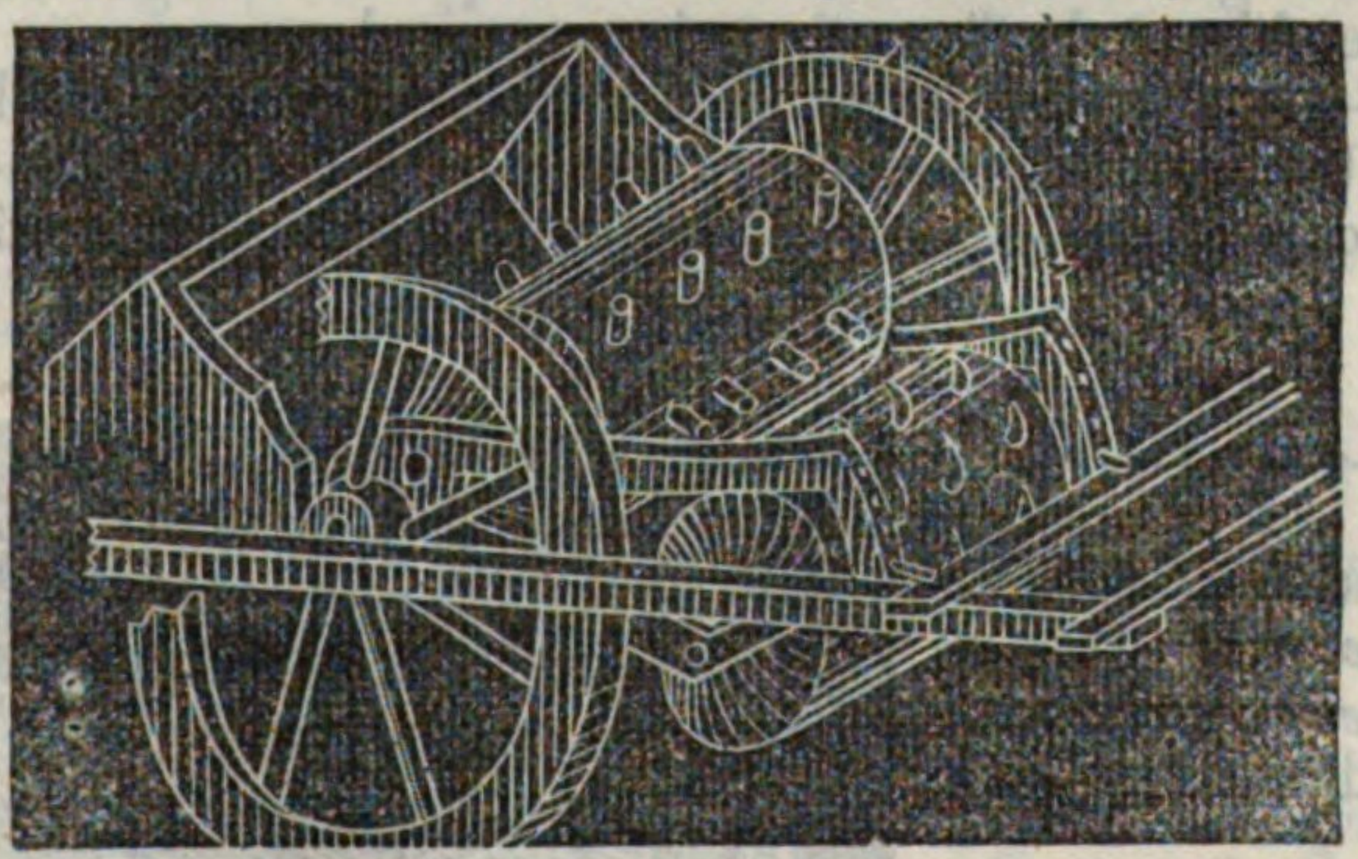


G is a reciprocating-gate, to which is attached an iron or steel plate H, extending up the sides of the gate as far as the gate moves on the knife F; J, pitman, of elastic wood or metal; E, board to gauge the length of the straw cut; P, rake. The gate G is pressed against knife F, on account of the elasticity of pitman J.

Claim.—Operating both the reciprocating-gate and the feeding-rake, by means of the compound spring pitman.

No. 10,113.—SAMUEL SNOW, of Fayetteville, and ALEXANDER HINE, of Lafayette, N. Y.—*Improvement in Cultivators.*—Patented October 11th, 1853.

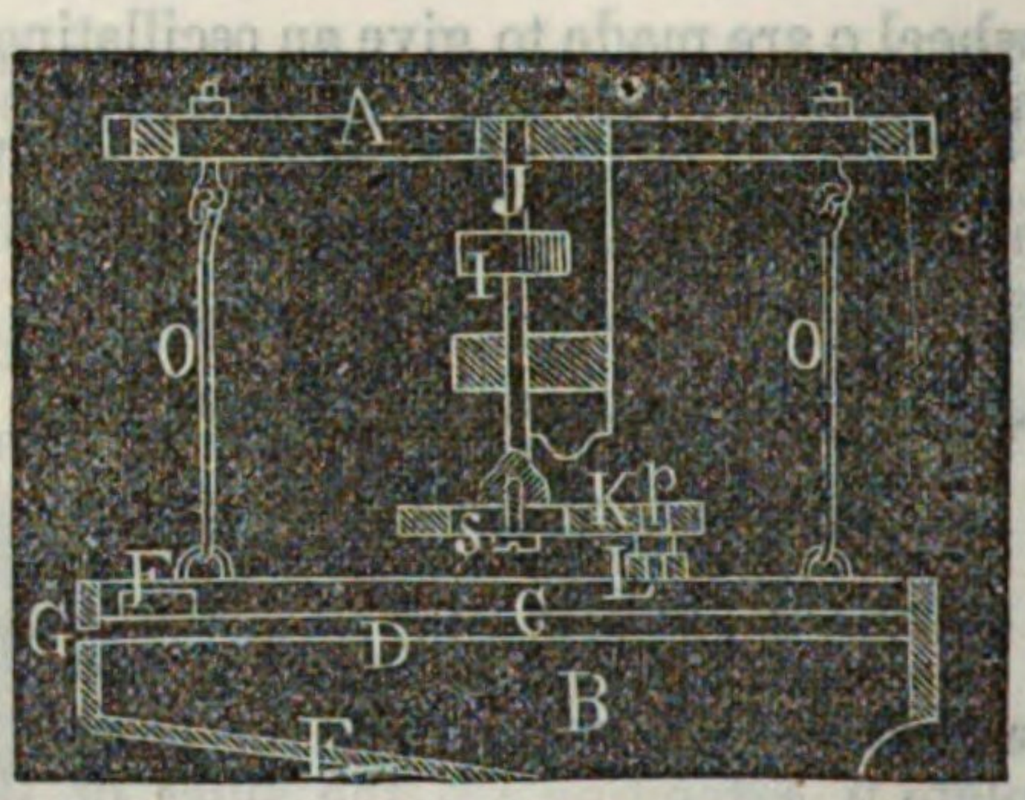
The figure and claim illustrate and explain this improvement.



Claim.—The combination of the two toothed cylinders with the receiving-box, all being arranged and suspended on an adjustable frame, in the manner and for the purposes set forth in the specification.

No. 10,114.—J. L. VAN VALKENBURGH, of Ogdensburgh, N. Y.—*Improved Machine for separating Cockle, &c., from Wheat.*—Patented October 11th, 1853.

In the figure, A represents the frame; B, the receiver, which is



supported adjustably by rods o from the frame; c, coarse sieve, which permits the grain to pass through freely; d, sieve fine enough to retain the grain; e, bottom of receiver; f, opening to let the coarse dirt pass off; g, opening for the grain to pass out; i, driving-pulley on shaft j; k, crank, with slot *s*, for the reception of shaft j; the end pivot p of crank k turns in the centre of a bar l, which is attached to the two sides of the receiver. The rotation of i will set the receiver in rotary motion.

Claim.—The communication of a reciprocating rotating motion to the sieves or separators, and also the construction of the machine in the manner substantially as set forth, for separating grain from cockle and other impurities.

No. 10,115.—H. W. Woodruff, of Watertown, N. Y.—*Improved mode of treating Metals in Casting.*—Patented October 11th, 1853.

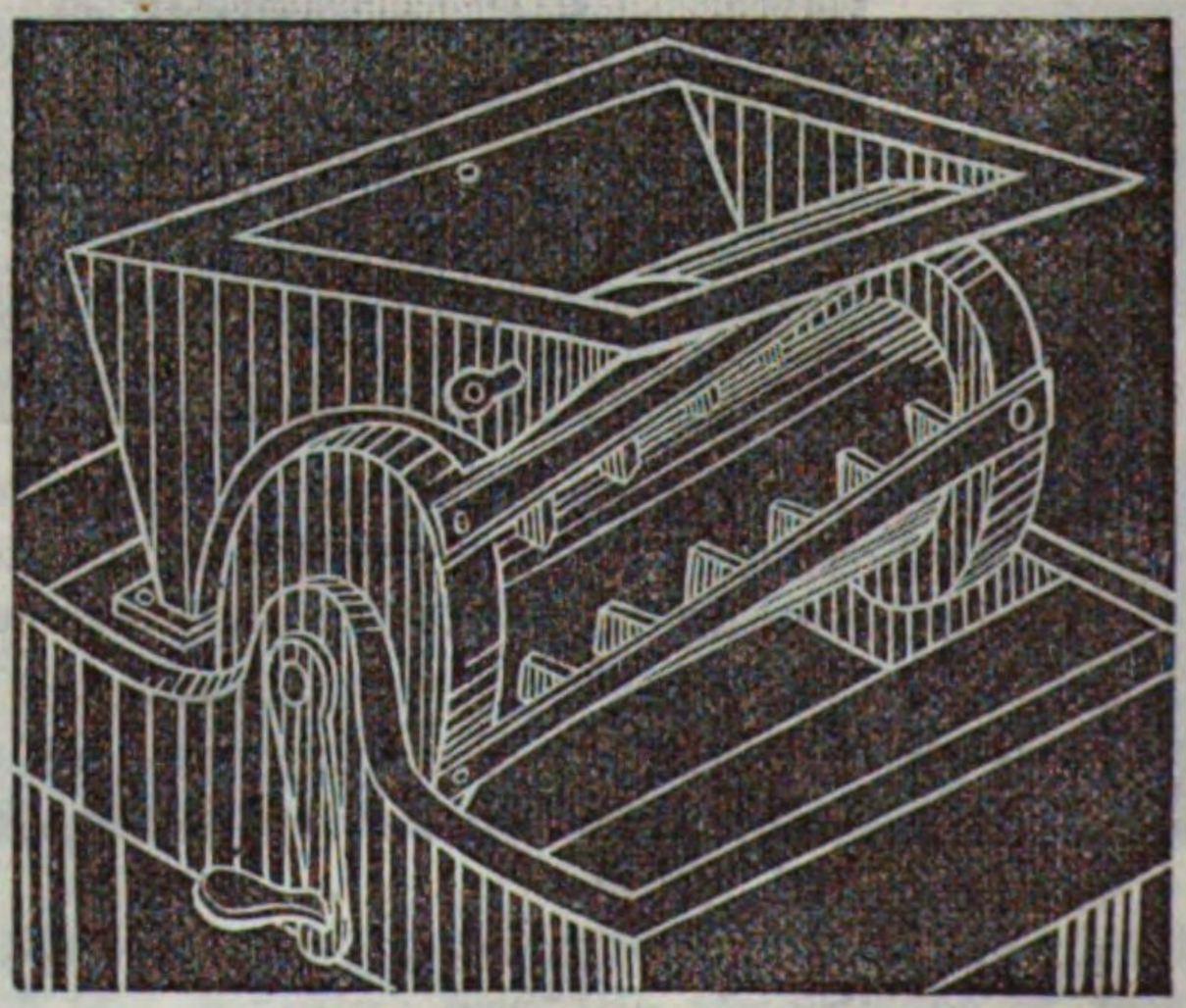
The object of this invention is the expulsion of impurities which are mechanically mixed with the metal in the molten state. The process is as follows: After the iron has been run from the furnace into the ladle in the usual manner, a large potato, secured on the end of an iron rod, is plunged into the molten iron, and kept at the bottom as long as may be desired: the mass soon becomes violently agitated, by which all foreign substances are thrown up to the surface, from which they can be skimmed off or otherwise removed.

Claim.—Treating metals while in a molten state, to expel impurities therefrom, by immersing therein some porous or cellular non-conducting substance or substances, containing liquid matter, substantially as described.

No. 10,116.—D. H. Whittemore, of Chicopee Falls, Mass.—*Improved Machine for Cutting Vegetables for Fodder.*—Patented October 11th, 1853.

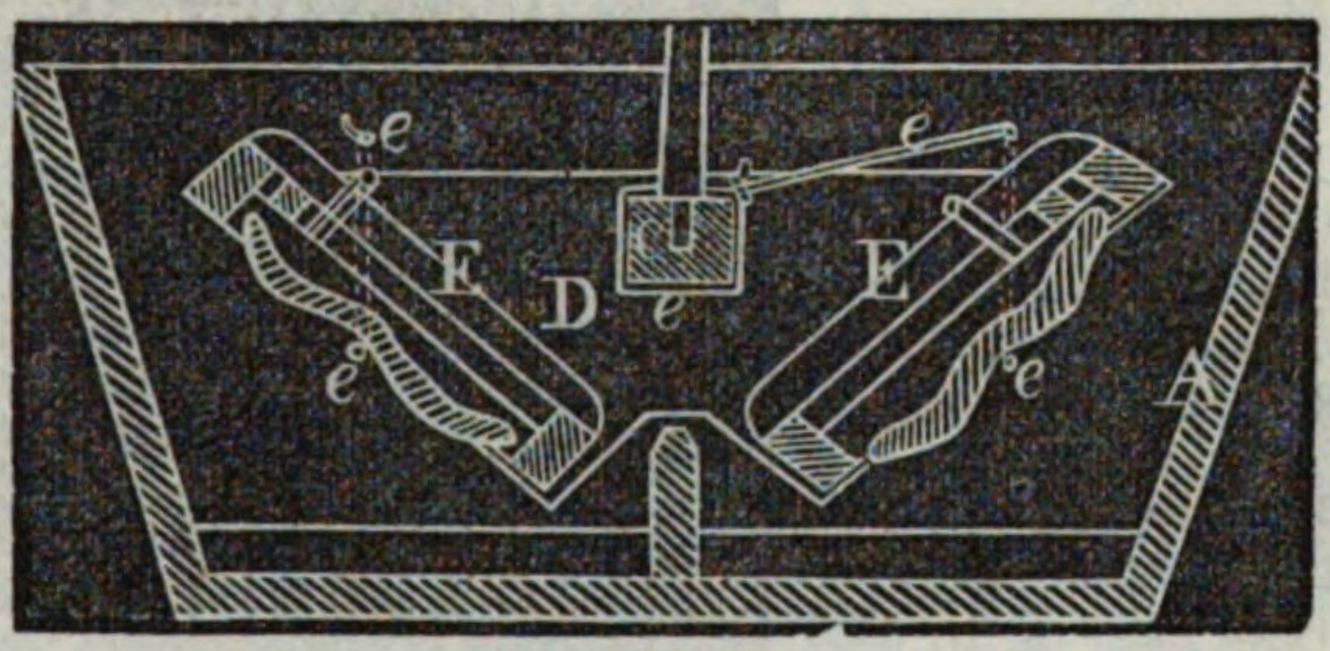
The figure and claim illustrate and explain this improvement.

Claim.—The combination of the long and short knives on the periphery of the cylinder, with the hopper, arranged as described and represented.



No. 10,117.—H. G. Robertson, of Greenville, Tenn.—*Improvement in Washing-Machines.*—Patented October 11th, 1853.

This machine consists of a rocking-frame D (see fig.) on a rocking-shaft C, having hinged slatted washing-boards E arranged inclining, and having cords *e e* for holding the cloths under its bottom while being washed. A is the tub, divided into two compartments, for washing white and colored clothes at the same time. The bottom of the tub is also slatted, and works in combination with the wash-boards. The rocking causes the clothes to strike parallelly the horizontal bottom and the hot suds, which latter are forced through the pores of the clothes by the two slatted surfaces coming together.



Claim.—The employment of the double-chambered slatted-bottom tub A, in combination with the vibrating or rocking-frame D, constructed as described; the wash-boards being made movable or swinging, so that the clothes can be easily laid on the cords; the whole being constructed, arranged, and operated in the manner set forth.

No. 10,118.—Banford Gilbert, of Pittsburgh, Pa.—*Improvement in Griddles.*—Patented October 11th, 1853.

Claim.—Constructing griddles of two pieces, separated by flanges furnished with openings to admit of the passage of cool air between the upper and lower pieces of the griddle, which openings may be closed at pleasure.

No. 10,119.—A. B. Latta, of Cincinnati, Ohio.—*Improvement in Valve-motion of Oscillating Engines.*—Patented October 11th, 1853.

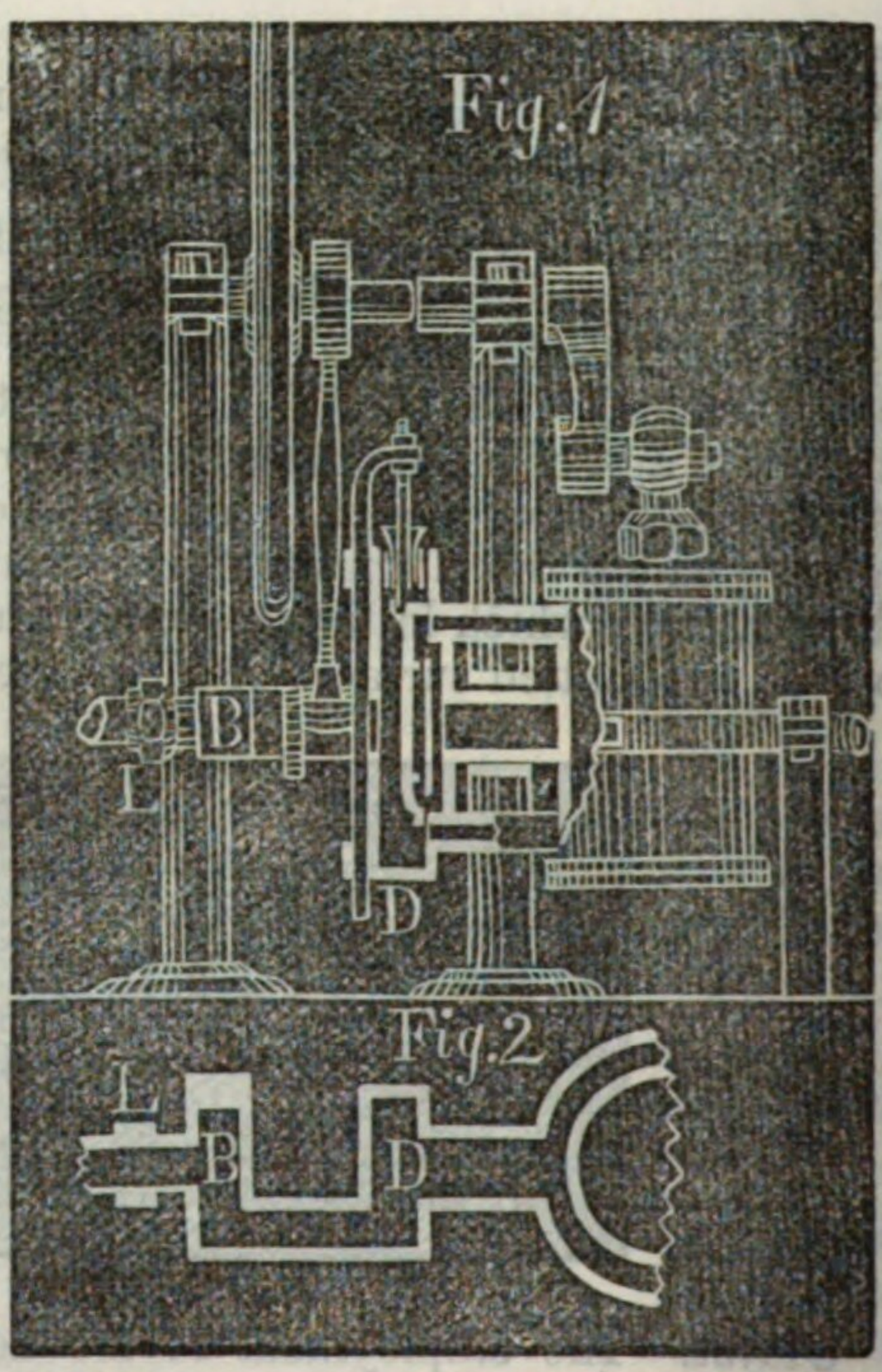
By reference to the annexed figures, the claim will explain this invention.

Claim.—The mode of arranging the valve-chambers outside the barring or trunnion on which the cylinder oscillates, in such manner as to allow the wrist-pin of the eccentric rod to move equally across the centre of the trunnion, and moving equally above and below; and thereby giving motion to the valve or valves by said

eccentric, independently of the oscillating of the cylinder.

Also, the sliding bar or bars to which the eccentric is attached, and passing up the whole length of the valve-chambers to the end or ends, as the case may be, and attached to the valve-rods, thereby giving motion to the valves.

Also, this arrangement, as set forth by drawings or their mechanical equivalents.



No. 10,120.—YELLAND FOREMAN, of New York, N. Y.—*Improvement in Metallic Boats.*—Patented October 11th, 1853.

The object of this invention is to obtain the greatest amount of interior space, strength, and stiffness, and at the same time a large amount of insulated buoyant power, safely distributed.

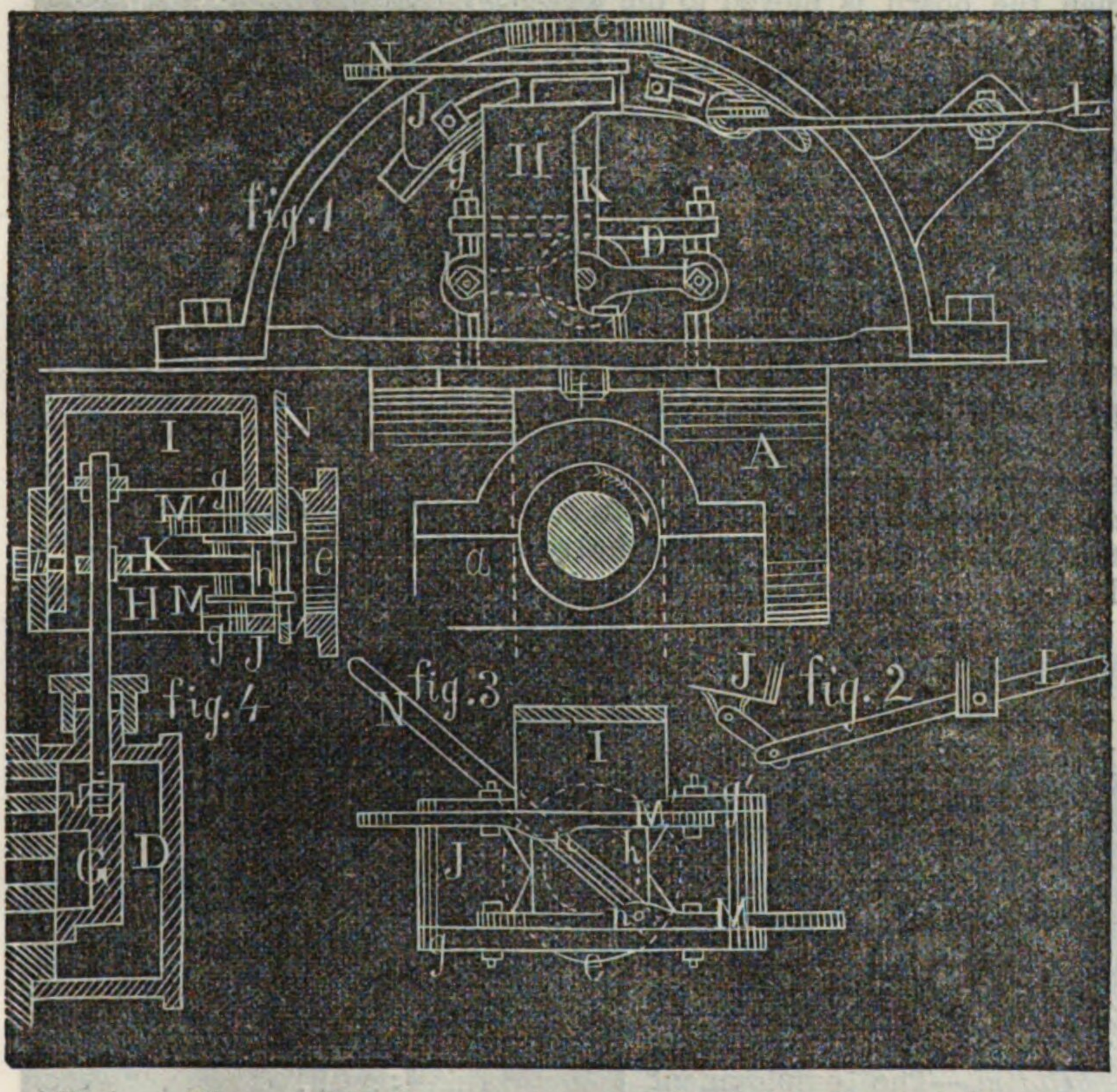
Claim.—Constructing the body of life-boats wholly of metallic tubes, brazed or similarly united throughout, thus affording a water-tight and solid metallic connection and mutual bracing of every part, whereby the objects referred to are attained in an advantageous manner.

Also, in combination with such boat, the detachable tubular seat.

No. 10,121.—WILLIAM STEPHENS, of Pittston, Pa.—*Improvement in the Slide-Valve Motion of Oscillating Engines.*—Patented October 11th, 1853.

The valve-motion which forms the subject of this improvement produces the necessary movement of the slide-valve by means of a fixed groove or guide attached to some part of the engine-frame, in a convenient position to receive a stud attached to the valve-rod, the stud receiving a proper motion by being carried along the groove or guide by the oscillation of the cylinder. (See figs.) A, cylinder, oscillating in bearings *a*; D, valve-box; G, slide-valve; H, frame, which has a hole on its top to receive a hollow journal *e* at the top of way-frame I, which is adjustable, containing the groove or guide; screw-stud *f* forms a pivot for the lower part of the way-frame—the journal *e* and pivot *f* thus forming an axis which is radial to the axis of oscillation of the cylinder. The arc J has a groove or guide formed by strips *g g'*, projecting on its under side for the reception of friction-roller *h*, which turns on a pivot on the cross-head K, secured to the valve-rod;

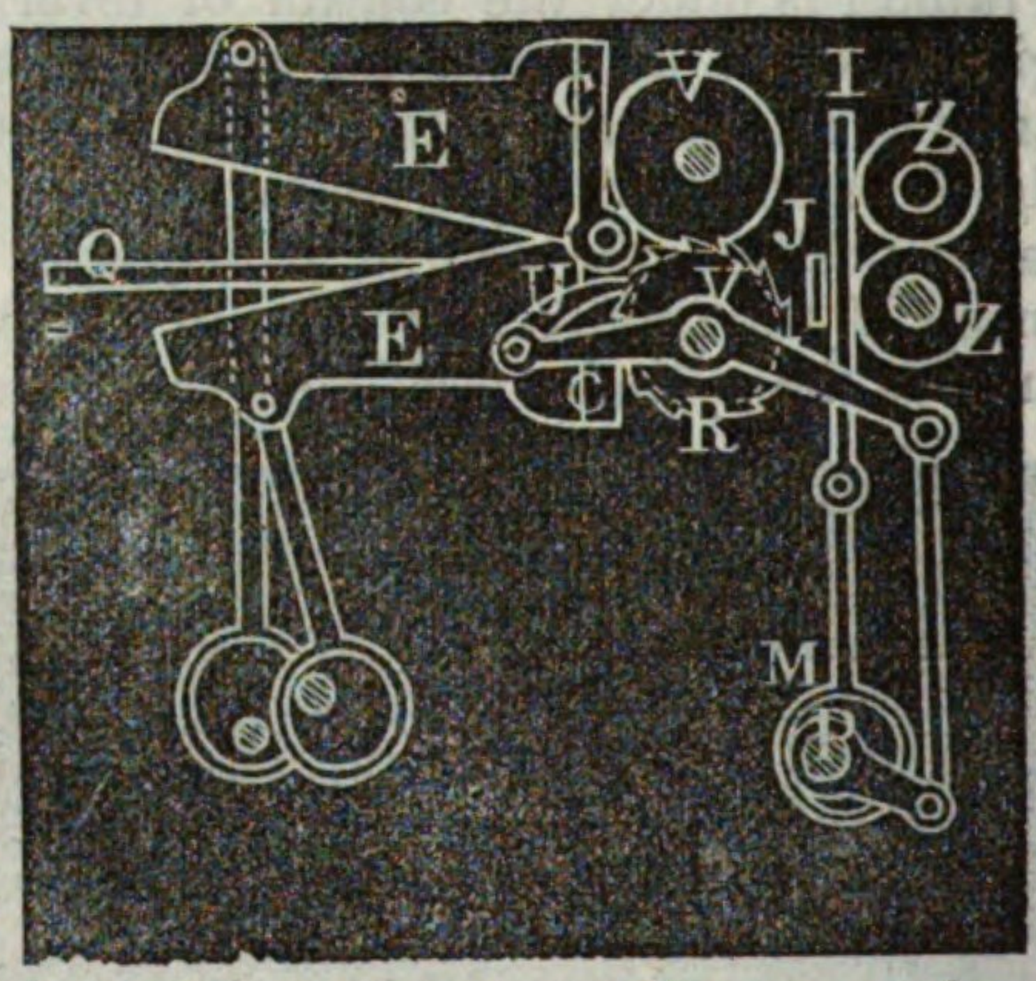
the two eyes *k k* of this rod fit to two guide-rods *l l*, which are so secured to the valve-box as to preserve the rectilinear motion of the rod. Frame I is under the control of lever L, having its fulcrum in the engine frame; and can be adjusted on its axis *e f*, so as to bring arc J at an inclination to the axis of the cylinder's motion, as shown in fig. 2, or at right angles to the axis, as in fig. 3. The arc being in this latter position, the engine is stopped; but when in the position shown in fig. 2, the groove is similar to the recess in the thread of a screw, and, as the cylinder oscillates, gives motion to the valve.



Claim.—The combined arrangement of the slide-valve and the guide J, which assists the oscillation of the engine in producing, and directs the motion of the valve, substantially as described, to wit: the valve being arranged to work transversely to the cylinder, and the guide being in the form of part of a helix or screw, concentric to the axis of the cylinder's oscillation, and receiving an arm or cross-head attached directly to the rod or stem of the valve, whereby the intermediate mechanism usually employed is dispensed with.

Also, giving the necessary or desired "lead," by means of the adjustable sliding lining pieces M M′, which line the sides of the guide, and are furnished with projecting or rising parts *n n*, which will give the necessary "lead," in working the engine in either direction.

No. 10,122.—John A. Elder, of Westbrook, Me.—*Machine for Cutting Pasteboard.*—Patented October 11th, 1853.



To operate this machine, power is communicated to shaft P, and the pasteboard laid on the table or arm Q, and then moved into the series of shears E E, which close and cut into the pasteboard; then the board is moved to the rolls V V, which take the board and move it to the shears I J; the shear-blade I, which moves in a vertical slot, is drawn down by the eccentric M, and at the same time the series of shears E E cut into the pasteboard, and when they are opening, V turns the ratchet-wheel R, and this wheel turns the rollers V and Z, carrying along the pasteboard; then the shears E E and I close and cut the pasteboard, and so on until the whole sheet of pasteboard is cut up.

Claim.—The arrangement of machinery for cutting pasteboard into strips, and those strips a given length at the same time. Also, the arrangement of the rocker-shaft C, rolls V V, Z Z, and shears I J, for the purpose specified. Also, the series of shears E E, or its equivalent, for the purpose described

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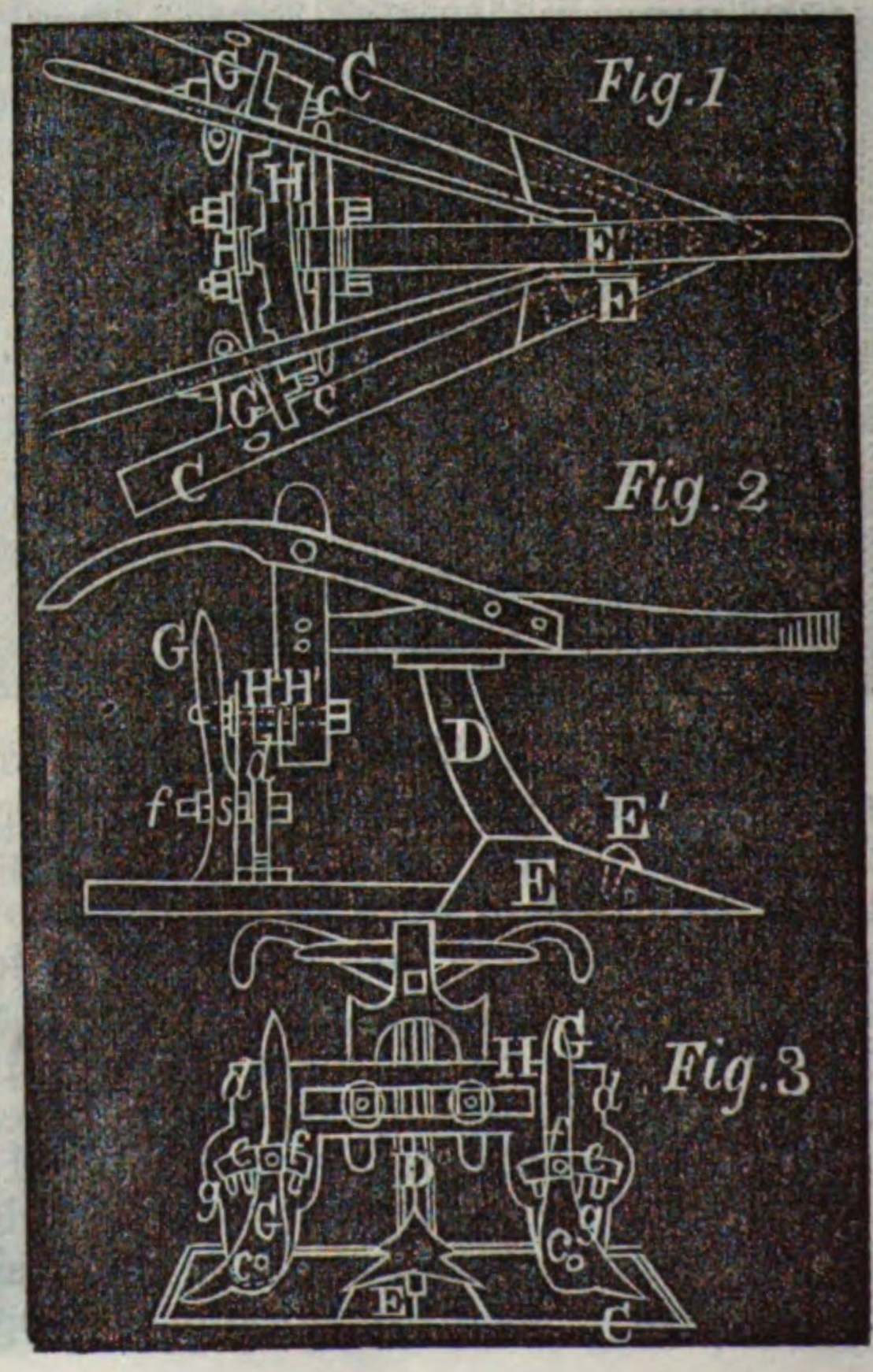
No. 10,123.—L. M. Whitman, of Weedsport, N. Y.—*Improvement in Cultivators.*—Patented October 11th, 1853.

By reference to the annexed figures, the claim explains the nature of this improvement.

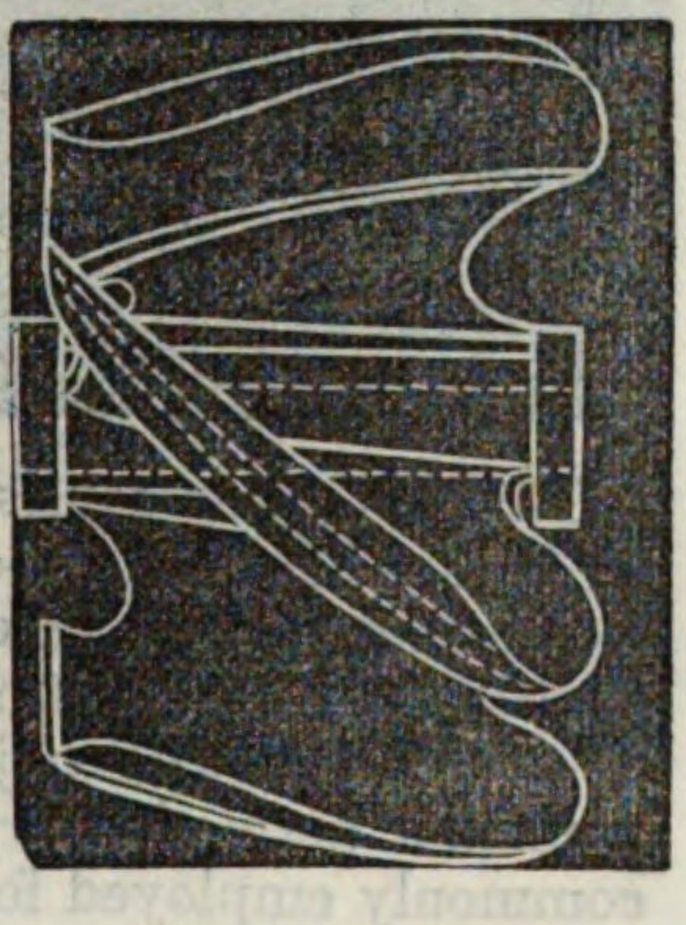
Claim.—The employment of the long inclined spring-wings c c, secured at their front ends to the share and main standard, and turning upon the pin E′, in combination with the mechanical contrivances herein shown, for expanding and contracting the wings, or setting them more perpendicular and nearer together, for the purpose of throwing more pulver-



ized soil against or up to the hills, or setting them less inclined to the horizontal plane, and further apart, for the purpose of allowing the pulverized soil, weeds, &c., to pass over them into the broad open spaces in the centre, the wings, in either case, cutting up the weeds and pulverizing the soil, as fully set forth in specification.

No. 10,124.—Ebenezer Beard, of New Sharon, Me.—*Improvement in Screw-Propellers for Propelling Vessels.*—Patented Oct. 18th, 1853.

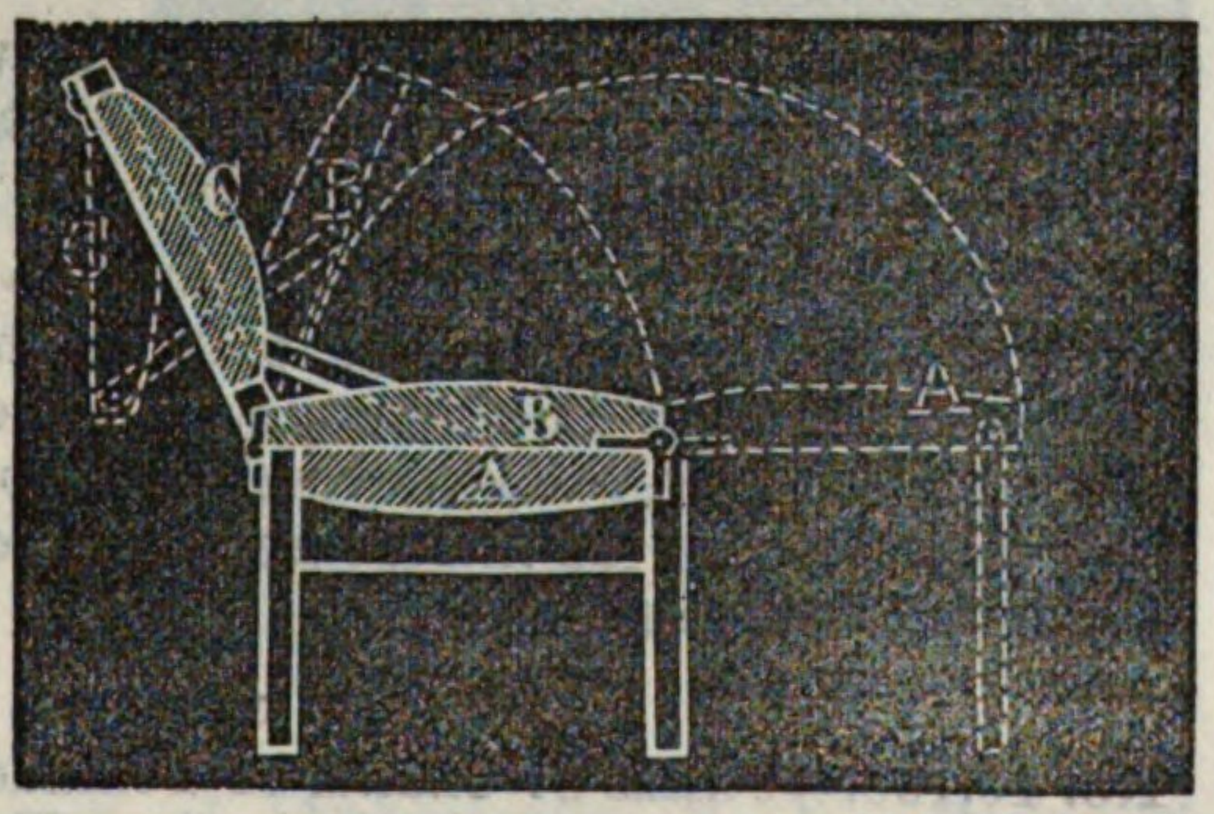
This invention relates to certain improvements in the form given to the blades of a screw-propeller, and consists in placing flanges circumferentially upon the propelling surfaces of the blades at their outer margins, and also at their inner margins, when the blades are made much broader than their arms, as shown in the figure. They are also placed upon the back sides of the blades at their circumference to render them more efficient in working backwards.



Claim.—The use of one or more flanges or rims, placed circumferentially upon the blades of a screw-propeller, substantially in the manner and for the purposes described.

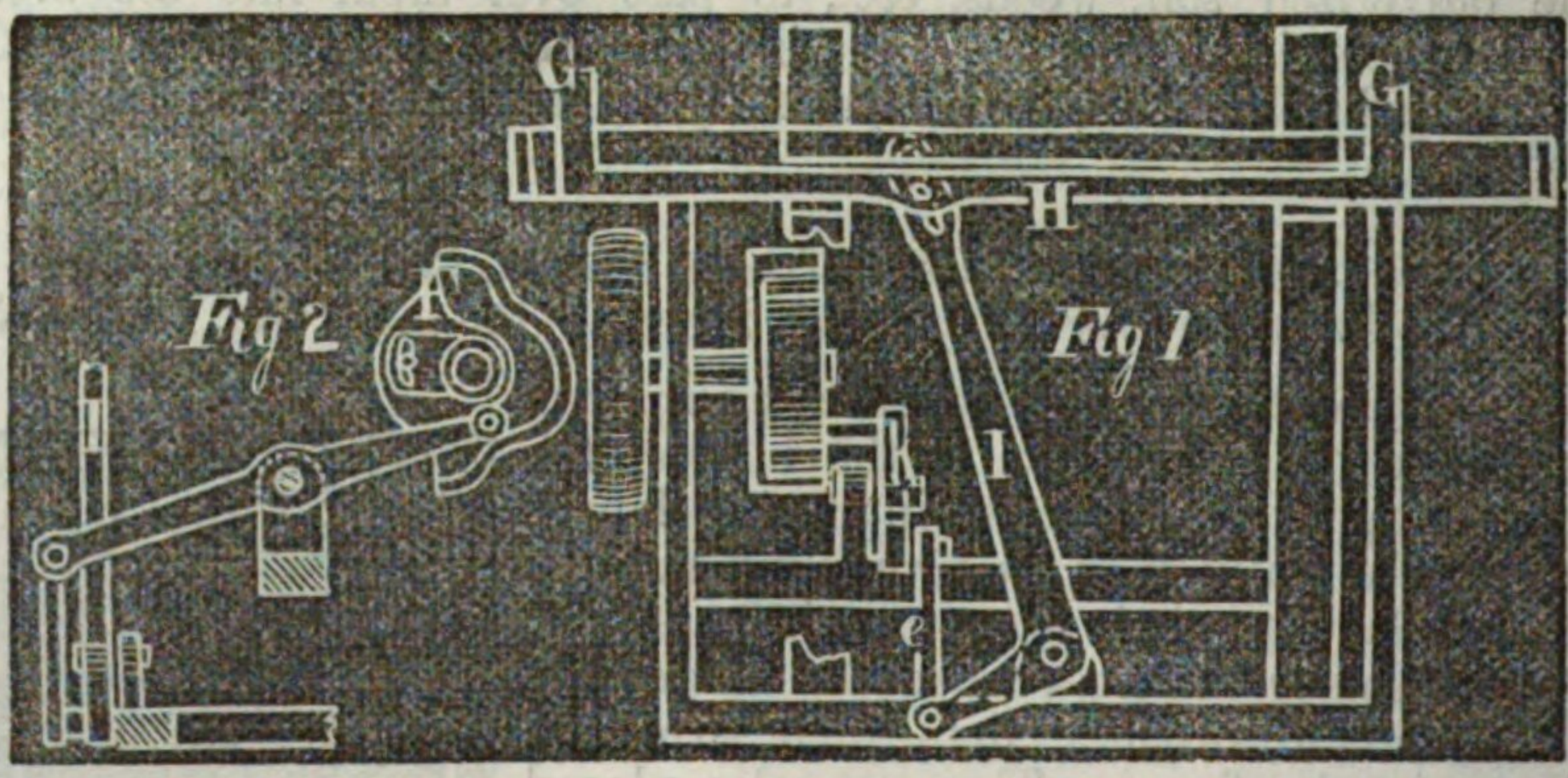
No. 10,125.—Edwin B. Bowditch, of New Haven, Conn.—*Improved Sofa-Bed.*—Patented Oct. 18th, 1853.

By reference to the annexed figure, the claim will explain this improvement. A is the under seat hinged to the front of the sofa in such a way that it can be turned out, when the seat B is turned back. C is the back of the seat, and may be moved back, as indicated in the dotted lines.



Claim.—The arrangement of hinging the ordinary sofa-seat to the back-rail of the sofa-frame, in combination with the arrangement of hinging an under seat with the upholstered side down to the front-rail of the sofa, so that said under seat, by lifting the ordinary seat back, can be turned out to the front of, and on a level with the ordinary seat, thus forming a bed. Also, the arrangement of hinging the stuffed back to the top rail of the sofa, and attaching the back, at the bottom, to the top seat by strips of iron, in combination with the arrangement of hinging the top seat at the back lower corner.

No. 10,126.—William Crighton, of Fall River, Mass.—*Improvement in Shuttle-motion of Looms.*—Patented Oct. 18th, 1853.



This invention consists in connecting the two pickers G G (see fig.) by means of a rigid rod H passing through the lay, and giving motion to the same, by a picker-lever I, which is operated upon to throw the shuttle in both directions by a single cam on a short shaft at one side of the loom. The object of this improvement is the giving of the pickers a perfectly parallel motion, by simpler mechanism than that commonly employed for the purpose. Figure 1 is a front view of the apparatus, and figure 2 shows parts of it in a side view.

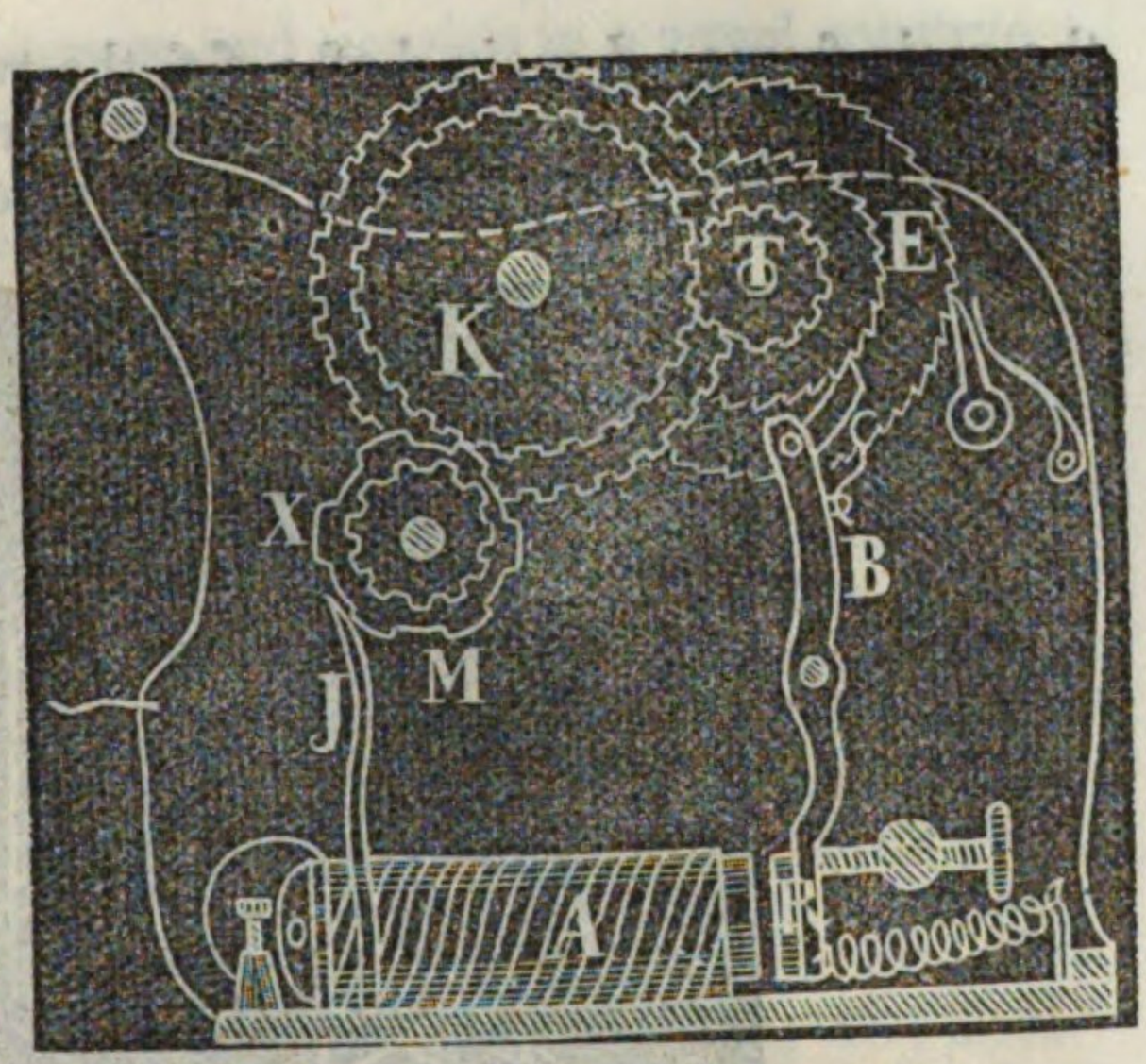
Claim.—Connecting the two pickers with a rod or rigid connection H, which receives motion from a single lever I, and one cam F, whereby both pickers are operated, as herein set forth.

No. 10,127.—Henry S. Crider and David Williams, of Lancaster, Ohio.—*Improvement in Mechanical Dentistry.*—Patented Oct. 18th, 1853.

Claim.—Securing the artificial teeth to a plate by the usual method, and afterwards fastening said plate on the alveolar ridge of the plate having the impression of the mouth, either by riveting or the employment of soft solder, so as to prevent the application to the plate (having the impression) of the intense heat required to secure the teeth, as and for the purpose herein set forth.

No. 10,128.—James J. Clark, of Philadelphia, Pa.—*Improvement in the Construction of Self-winding Telegraph-Registers.*—Patented Oct. 18th, 1853.

The operation of the several parts of this improvement is as follows: When the spring unwinds and propels the train of register-wheels, it also rotates the break-circuit wheel M; as the wheel M revolves, the spring J alternately strikes the face of the teeth x x, and falls into the cavities between them. Each time J (the spring) presses on the teeth x x, it, by so doing, closes a galvanic circuit extending from the battery around the winding magnet. When the spring falls between

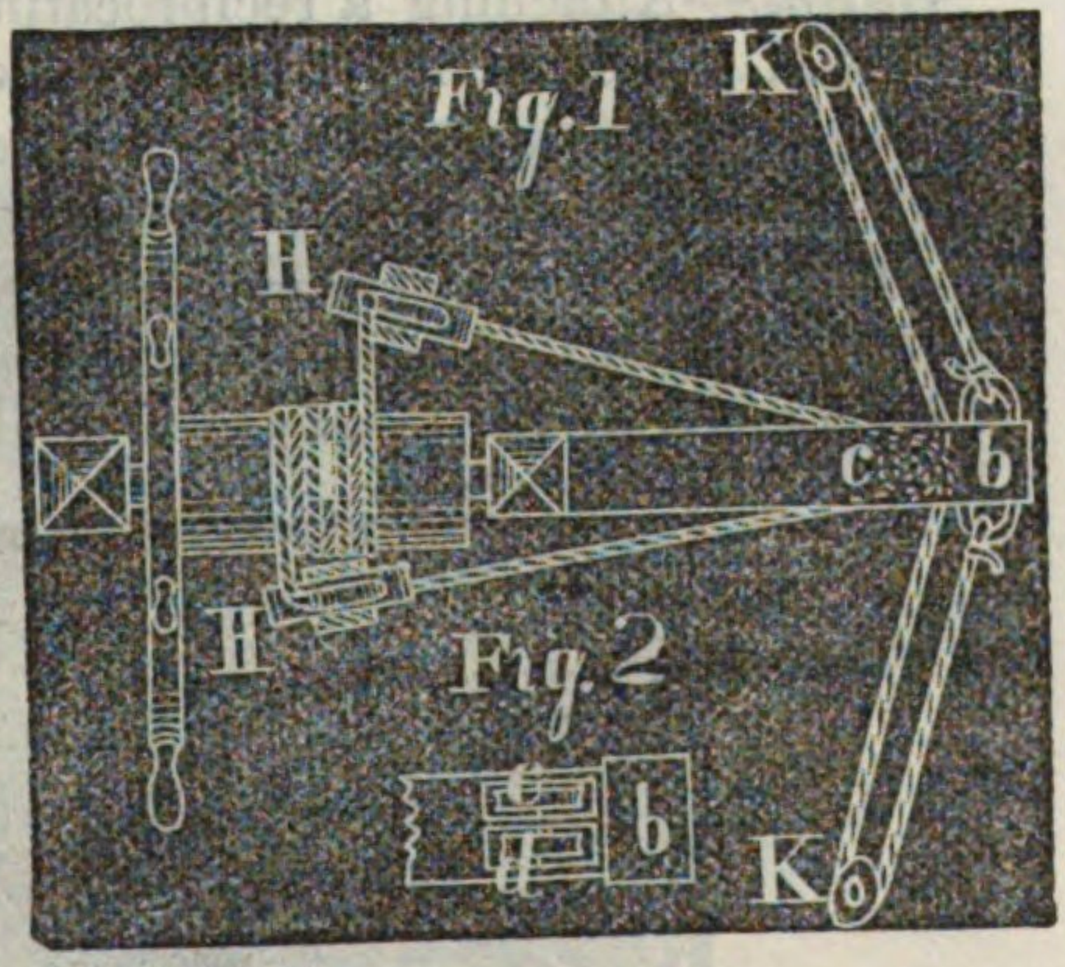


the teeth, this circuit is broken. The winding-magnet A, thus caused alternately to attract and release the armature R and the lever B attached thereto, moves the ratchet-wheel E through the space of one tooth at each vibration. The number of teeth on the break-circuit wheel M is so proportioned that the lever B is caused to vibrate with sufficient rapidity to revolve the spring-shaft (through its gearing with the shaft T) with the same velocity that the spring unwinds itself to revolve the train of register-wheels. To start the train of register-wheels the wheel K is turned, which winds up the spring, which is fastened to the same shaft.

Claim.—The combination of the winding-magnet, the break-circuit wheel, and spring, with the train of wheels of an ordinary telegraph-register, as set forth.

No. 10,129.—CHARLES FLANDERS, of Boston, Mass.—*Improvement in Steering Apparatus for Vessels.*—Patented Oct. 18th, 1853.

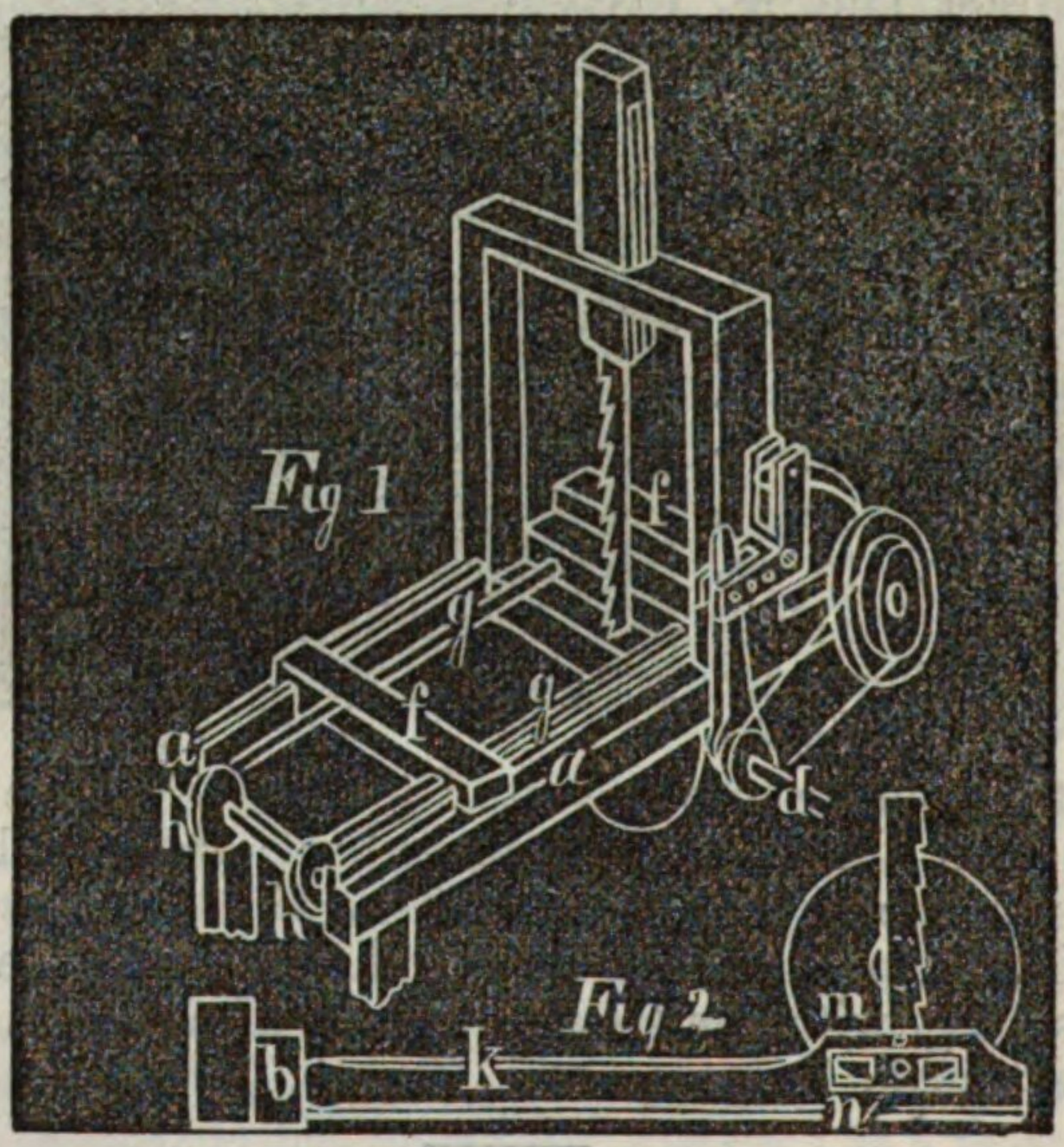
Claim.—The combination and arrangement of the rope I, the two sets of leading-blocks H H′, K K′, and the sheaves *c d* in the after end of the tiller, with one another; the tiller and windlass so as to operate together and move the rudder, substantially as described.



No. 10,130.—BENJAMIN FRAZEE, of Durhamville, N. Y.—*Improved Portable "Mully" Saw-Mills.*—Patented Oct. 18th, 1853.

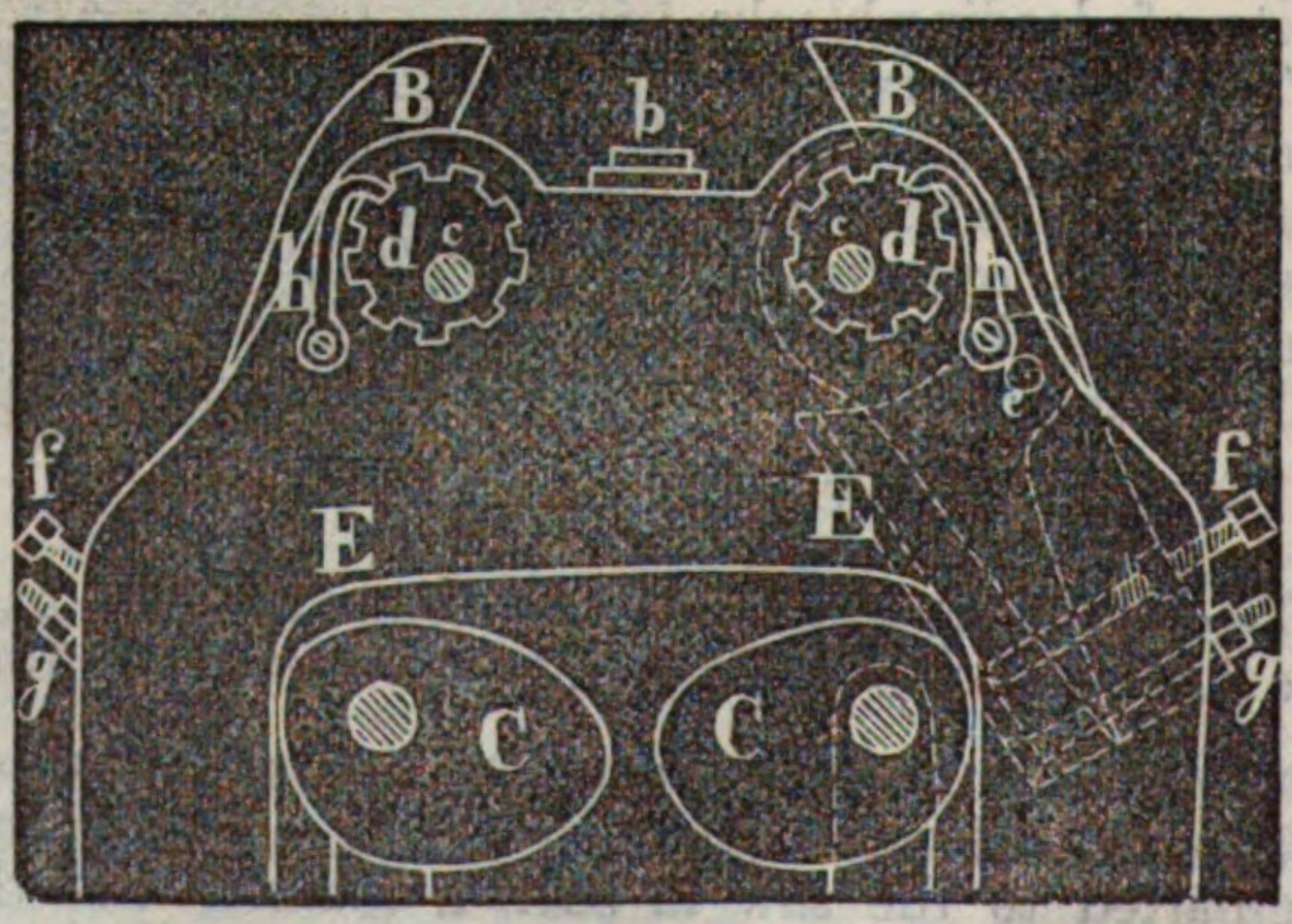
The nature of this invention consists in the method of attaching the saw-blade to the main shaft, by which a reciprocating movement is imparted to the saw in such a manner that the saw will draw into the log in its downward movement, and draw out from the log and clear itself on its upward movement; the whole being constructed without the usual incumbrances of sash, pitman, carriage, or geared or cogged pinions. (See figs.) *a a* horizontal sills of

the main frame; *d*, main shaft; *f f*, the two head-blocks connected by the endless chains *g g*. These chains pass over pulleys on the feeding-shaft which is operated by the ratchet-wheel and pawl.



Claim.—Attaching a reciprocating saw-blade to the main shaft by means of a slotted lever and crank-pin operating in the manner set forth.

No. 10,131.—Robert Griffiths, of Newport, Ky., and George Shield, of Cincinnati, Ohio.—*Improvement in Machinery for making Wrought-iron Railroad-Chairs.*—Patented Oct. 18th, 1853.

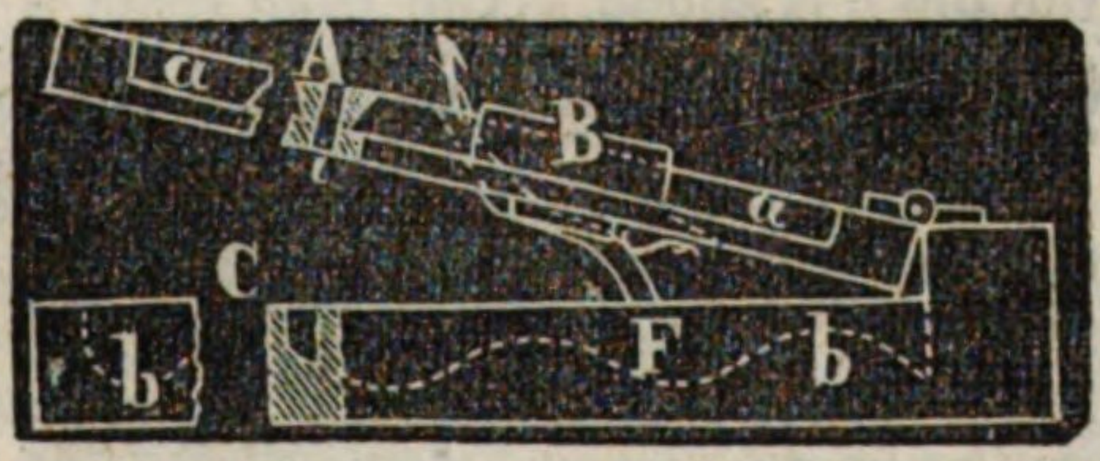


This invention has reference to that class of machines for making railroad-chairs in which the blank or plate is first clipped, and the clip afterwards bent to form the lip for lapping over the lower flange

of the rail on the sleepers or bearers, and consists in a novel construction and mode of hanging the clipping and bending levers, whereby they are made "adjustable to the greatest nicety," to suit different thicknesses of blanks or plates, various lengths of lips and distances apart between the clips, and various degrees or configurations of bend to the clip, as the form of the rail may require. (See figure.) *b* is the mandrel upon which the plate or blank is placed after being heated; B the clipping-levers (and in the same manner the bending-levers) having their fulcra *c* in eccentrics *d* inserted in the head-stocks, and being made to operate upon the plate by the action of the revolving cams o against their tail-end, their own weight serving to throw them back or open, after the operation has been performed. The tail-end of each of the levers is pivoted by a joint-pin *e* to the box-lever E, and affixed therein at any required set by adjusting screws *f* and *g*.

Claim.—Hanging the fulcra of the clipping and bending levers eccentrically in boxes made capable of circular movement, for the purpose of adjusting the said levers to their work with facility and accuracy. Also, the method of adjusting the angular set of the clipping and bending levers by pivoting and adjustably connecting them to outer operating levers, whereby a varied inclination may be given to the cutting and bending of the clip, to suit different thicknesses of blanks or forms of chair required.

No. 10,132. GEORGE W. GRISWOLD, of Carbondale, Pa.—*Improvement in Cutting Apparatus for Tailors, &c.*—Patented Oct. 18th, 1853.



(See fig.) The cloth is passed between the jaws A and C. The jaw A has, through nearly its whole length, a slot I to make room for the knife *j*, as it passes along. The knife is hinged to the piece B, which slides on dove-tail nuts *a a*, outside the jaw A. The foot F of the knife passes along the waved bottom line, and the knife *j* moves up and down during the cutting operation.

Claim.—Stretching the material to be cut over the two jaws of the stock, and holding it firmly in place by the clamp, whilst the knife divides it with a draw-cut, substantially as set forth.

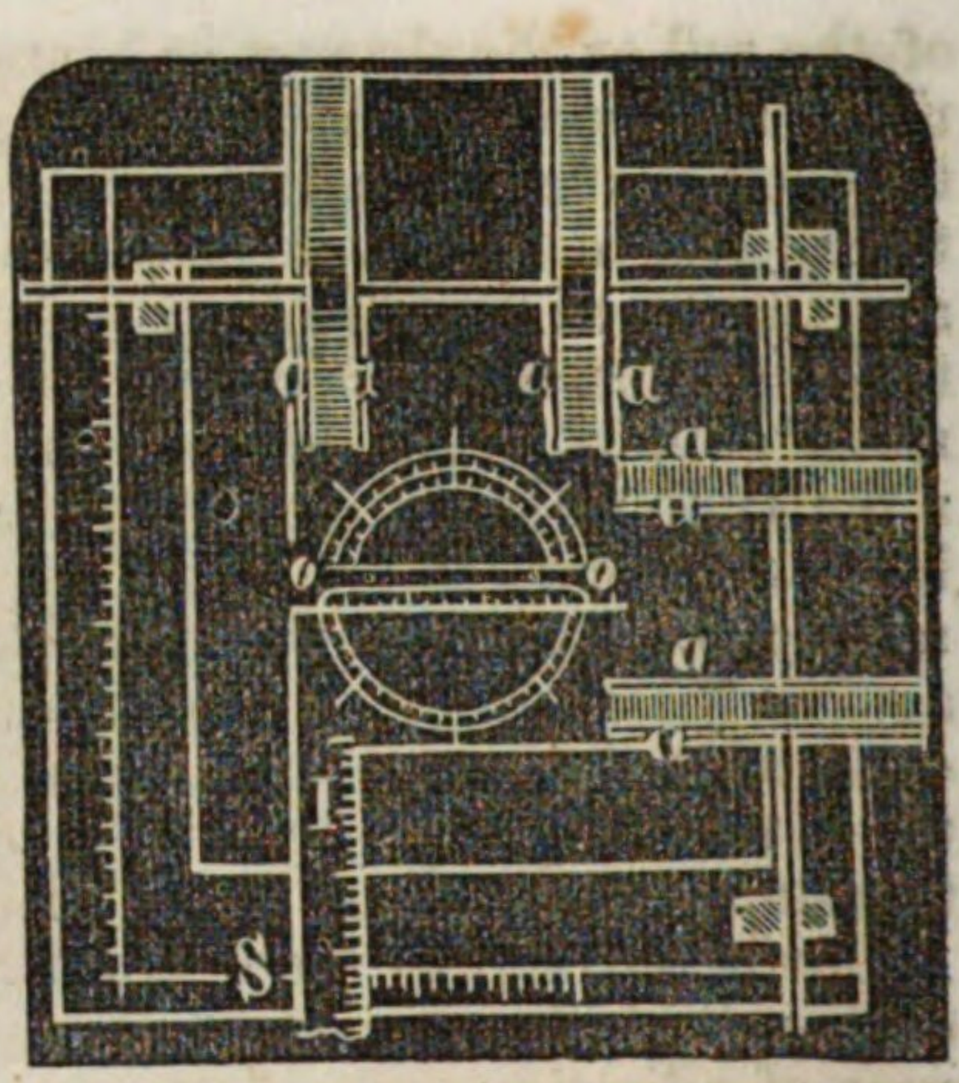
No. 10,133. THOMAS HINKLEY, of Hallowell, Me.—*Improved Machine for finding Distance, Departure, Difference of Latitude, and for Drafting.*—Patented Oct. 18th, 1853.

The axes of the wheels B B and B′ B′ are made to turn and slide longitudinally in boxes A A A, and gear into racks R R and R′ R′. By means of the sunken racks (or the racks provided with parallel edges or bars *a a*), the pinions, and the shafts made to rotate and slide in

these supports, a compound or resultant parallel motion of the compass-plate can readily be obtained.

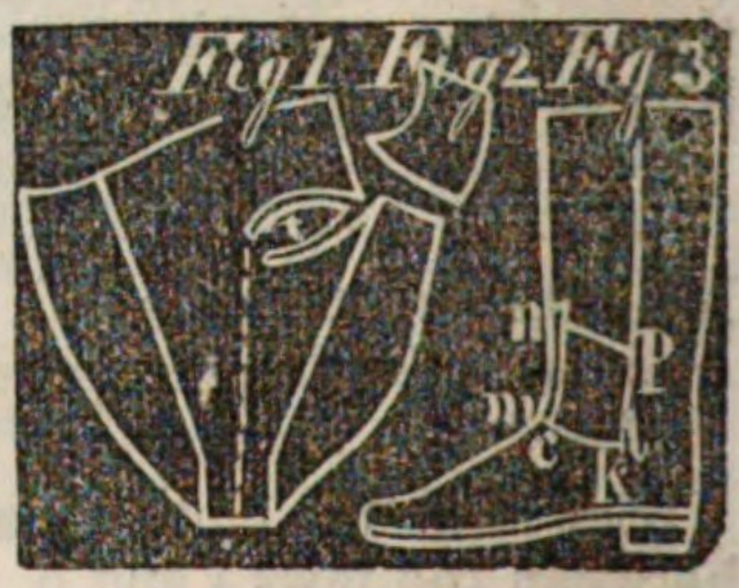
(The accompanying figure represents a top view of the machine.)

Claim.—The method or means of obtaining, in the above-described machine, a compound or resultant parallel motion, the same consisting in a combination of pinions or gears and sunken racks (racks provided with parallel bars), two sliding and rotary shafts, as arranged, connected, and supported so as to be operated together.



No. 10,134. Daniel Lynahon, of Buffalo, N. Y.—*Improvement in making uncrimped Boots.*—Patented Oct. 18th, 1853.

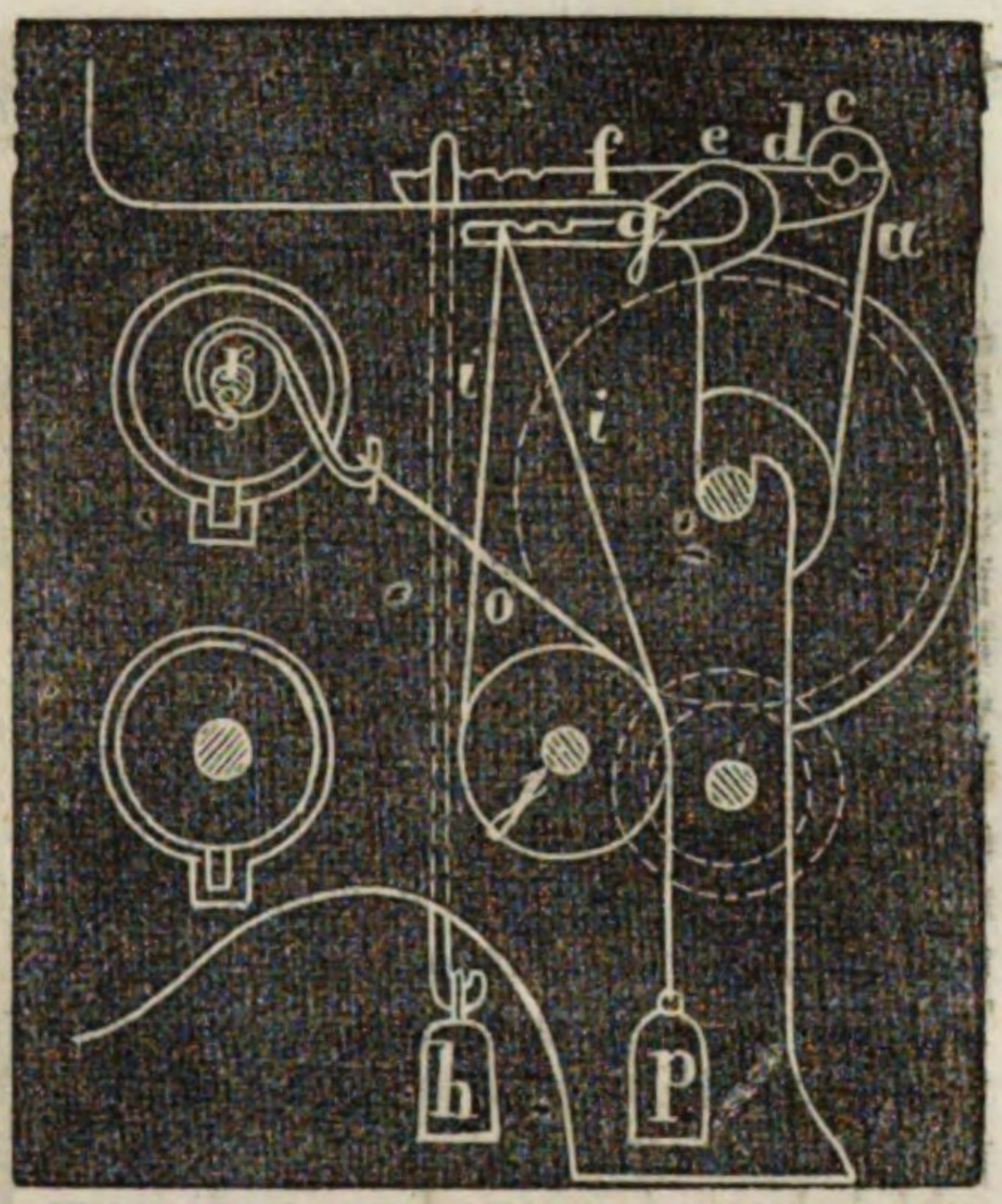
First, cut the vamp according to figure 1, and fold it together as usual. Secondly, cut the piece, fig. 2, and sew it on the side *c* of the vamp *k j*; the opposite half of the same size being a substantial part of the vamp. Then sew up the centre of the front, which forms the seams *l m* and *m n*. Then the top *o* is added. The front seam is covered with the tongue *i*, which is also a part of the vamp.



Claim.—The tongue *i*, which gives to the vamp a more exact crimped turn; secondly, covers the seam *n n* from being seen, and prevents it from ripping; and thirdly, keeps the other seams *l m* and *p n* permanent, by receiving the strain that comes on them when drawing on the boot.

No. 10,135. William Mason, of Taunton, Mass.—*Improvement in Power-Looms.*—Patented Oct. 18th, 1853.

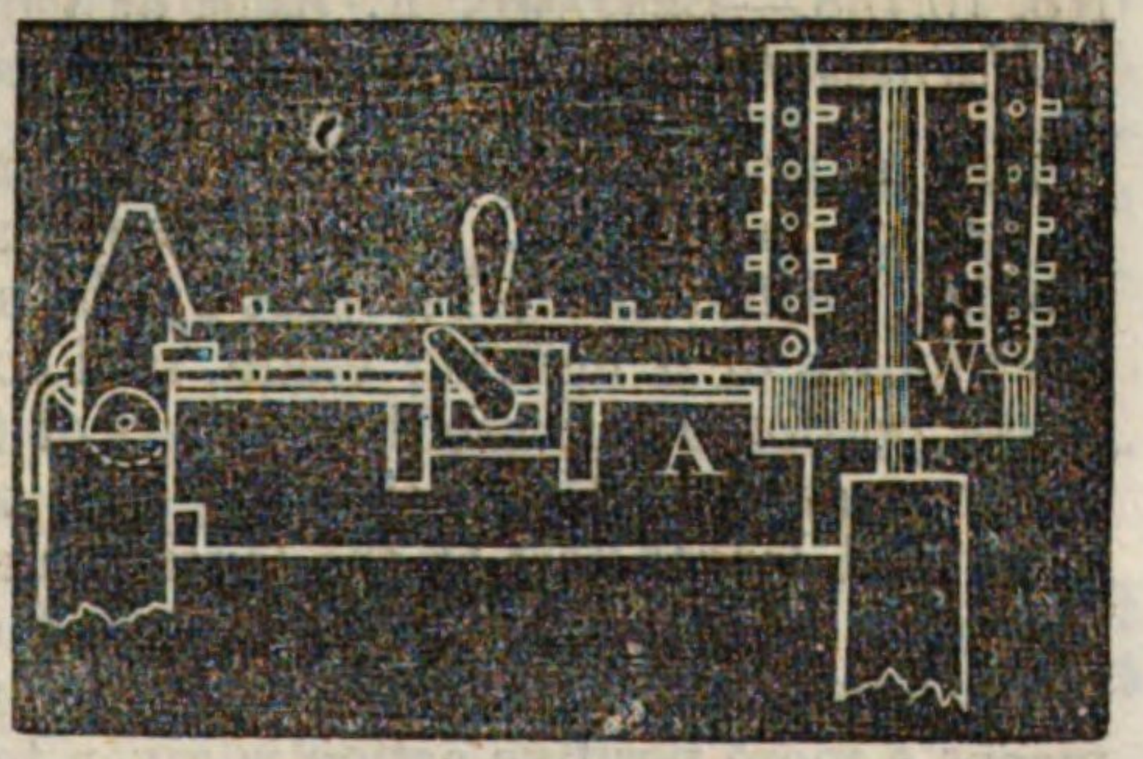
This invention consists in the employment of a whip-roll, over which the warps pass from the warp-beam to the breast-beam, which roll is forced up by adjustable weights, when the roll is combined by means of a friction strap or band with the periphery of a wheel, which, by gearing, communicates the let-off motion to the warp-beam, and which receives motion from a crank or eccentric from the lay or crank-shaft by a weighted cord wrapped around it, so that when the whip-roll is up and the friction-strap or band is loose, the weighted cord, actuated by the crank or eccentric, will turn the friction-wheel in both directions, and therefore will not let off the warps; but when the whip-roll is drawn down by progress of weaving until the friction-strap or band is drawn tight, the weighted cord slips in one direction on the wheel, and on the return-motion turns it to give out the warps.



(See fig.) *a*, the warps; *c*, the whip-roll on two arms *d d*, which sit on a rock-shaft *e*, provided on the other side with two other arms *f f* within the frame, and one *g* outside of the frame; *h h*, weights which force the whip-roll up against the warps; *i*, friction-strap suspended to arm *g*; *i* presses around one of the grooves in the periphery of wheel *j*; the other groove receives cord *o*, which is wrapped around it with a weight *p*; the other end of this cord is connected to an eccentric *r* on the end of the lay-shaft *s*.

Claim.—The method of operating the warp-beam to let off the warps, and ease them in the opening of the shed by means of the weighted cord acting on the periphery of a wheel geared to the warp-beam, and receiving motion from an eccentric or its equivalent; in combination with the mode of regulating the delivery-motion by the action of the warps on a weighted whip-roller acting by a friction-strap on the friction-wheel of the let-off apparatus, substantially as and for the purpose specified.

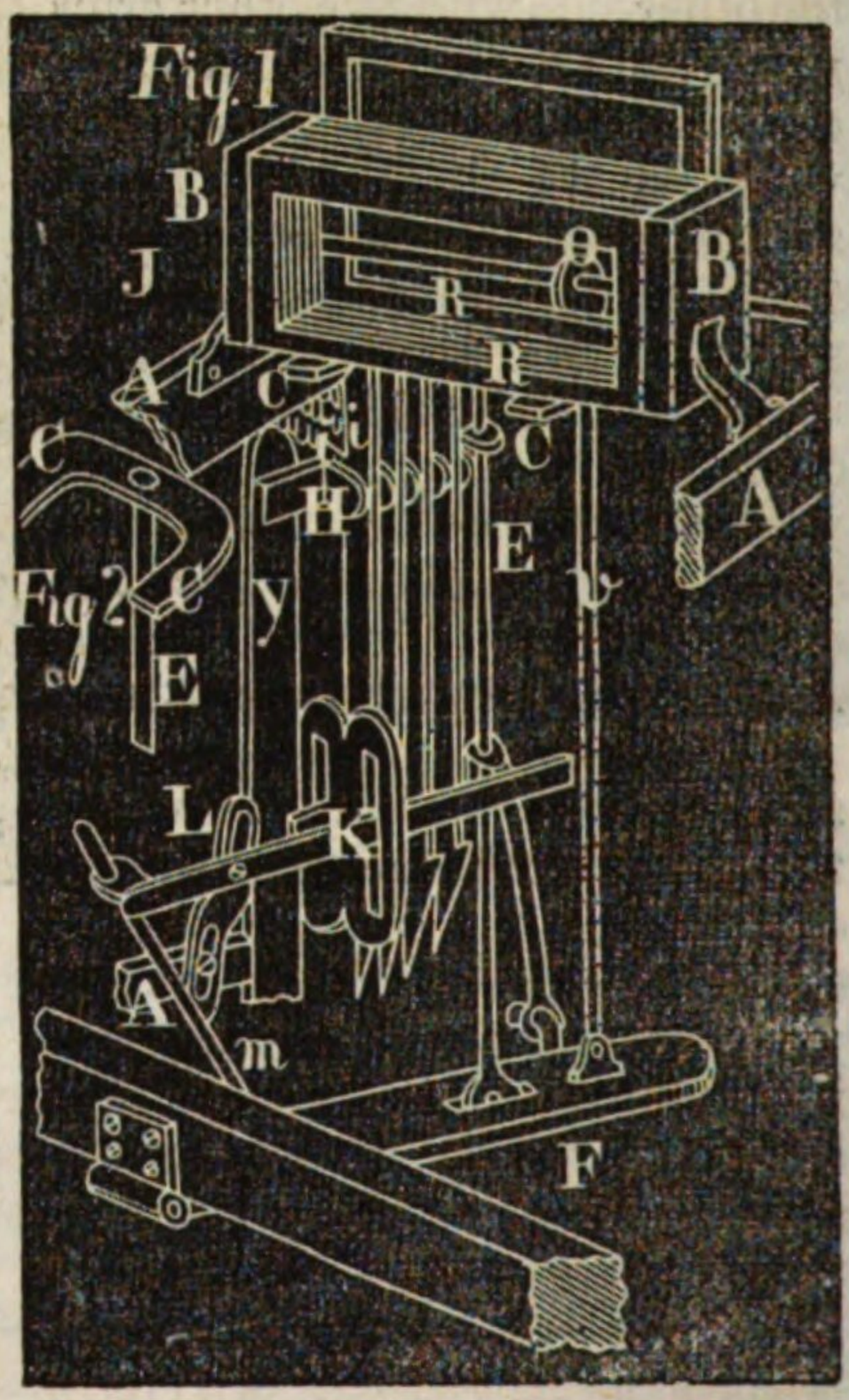
No. 10,136.—Norman Millington and Dennis J. George, of Shaftsbury, Vt.—*Improvement in the Mode of Figuring Carpenters' Squares.*—Patented Oct. 18th, 1853.



This improvement consists in providing the requisite number of chases set with the proper dies or figures, for the several lines of figures to be stamped on the different sides of the bar and tongue of the squares, and placing them perpendicularly on the rim of the wheel to which they are connected by a joint at the bottom in the proper order for stamping. And then placing the squares on an anvil, arranged to move laterally on ways, so as to bring the end of the line to be figured directly opposite to the end of the chase, which is turned down upon the end of the line or space for which the line of figures was arranged.

Claim.—The combination of the revolving chase-wheel w with the lateral moving-anvil A, by which the relative position of the square to be stamped and the required chase is so regulated, that the line of the square to receive the impression is brought under the chase containing the desired figures, as set forth.

No. 10,137.—JOHN PENDER, of Worcester, Mass.—*Improvement in the Mode of operating Heddles of Power-Looms.*—Patented Oct. 18th, 1853.



The nature of this invention consists in so arranging the harness, or heddles of the loom, that they will play up and down in a guide, and rest on a positive foundation, and be moved up and down as indicated by a pattern, by means of jacks with hooks. (See fig.) A is the frame of the loom; B B are the standard-guides in which the harness-frames slide; R R and C C are the rest supported on the pillar E. The harness-shafts fall upon this rest whenever they are let down. The pillar E is supported on lever F, which lever is moved up and down by means of eccentric *o* and pitman *v*. The jacks are attached to the harness-frames, and hang downward to the lever K through the rack H, on the part *y* of the frame A.

Claim.—The rest C C, in combination with the guides B B, when constructed as described.

No. 10,138.—BENJAMIN F. RICE, of Clinton, Mass.—*Improvement in Harness for Power-Looms.*—Patented October 18th, 1853.

The nature of this invention consists in employing levers formed of two or more parts, one of these parts being so constructed as to oscillate within the other part by the action of hooks and pins set in the grooves of a figuring chain, said hooks and pins acting upon the upper portion of the oscillating part of the levers, thereby causing the lower portion of the oscillating part to move to and fro within the outer and larger part of the levers, thus forming a groove in which a vibrating roller is made to act upon the outer and larger part of the levers; which operation raises and depresses the harnesses, by which means a more positive action is given to the levers which act upon the harnesses when run at an unusual speed, and a uniform shed is produced. Also, in giving motion to the figuring chain by the use of a crown-wheel, turned by the action of a finger projecting from a vibrating lever, and working in the openings of the crown-wheel. Also, in constructing the bars which connect the links of the figuring chain in such a manner as to admit of the insertion of hooks or pins, the lower part of which are made in the form of an inverted wedge, so that the hooks or pins are more easily adjusted, and also held more firmly in their position.

Claim.—The application of compound levers, constructed substantially as herein described, to the raising and depressing of harnesses or heddles. Also, employing a finger attached to the vibrating lever, operating as described, in combination with the crown-wheel, to move the figuring chain. Also, forming a groove in the bars of the figuring chain for the insertion of hooks or pins, or their equivalents, in the manner substantially as specified.

No. 10,139.—John Scott, of Philadelphia, Pa.—*Improvement in Air-Beds.*—Patented October 18th, 1853.

(The inventor's claim fully explains the nature of this improvement.)

Claim.—Forming a bed of an air-tight india-rubber cloth sack, inclosed or enveloped in a pouch-formed mattress, composed of two thicknesses of ticking or other suitable material, between which is interposed feathers, hair, cotton, or other soft substance, retained by proper quilting; the mattress conforming in shape and size to the air-sack when extended with air by flexible pipes.

No. 10,140.—Nathan Thompson, Jr., of Williamsburgh, N. Y.—*Life-Bucket.*—Patented October 18th, 1853.

The nature of this invention consists in confining between an inner and outer vessel a tight stuffing of cork or its equivalent, said vessel completely inclosing the cork or stuffing, and the whole being so shaped that it answers as a pail or bucket. Also, in securing the handle or bail thereto by means of metallic tubes and grooves in the handle.

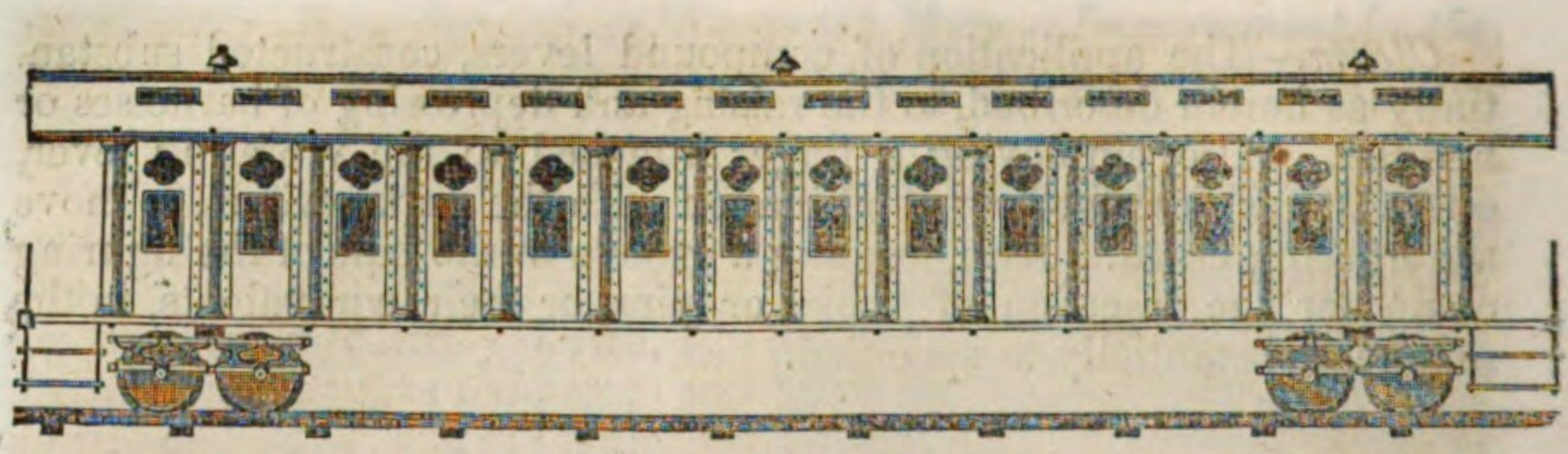
Claim.—A double vessel, the space between the outer and inner side thereof being filled with cork, or its equivalent, by which it is in a great measure secured against leakage, and retains sufficient buoyancy when punctured, and serves as a reliable bucket and life-preserver. Also, attaching the handles thereto by means of the tubes, the nicks in the handles, and the bending of the ends of the tubes therein.

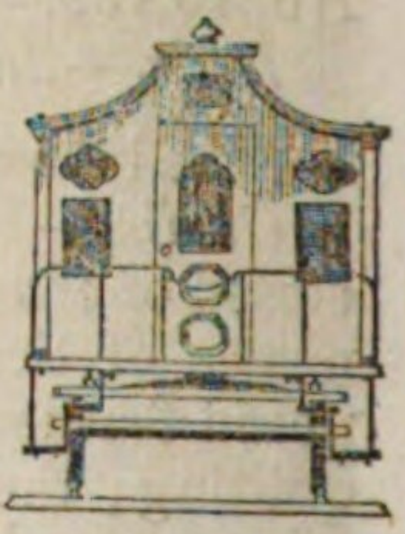
No. 10,141.—Nathan Thompson, Jr., of Williamsburgh, N. Y.—*Life-preserving Seat or Bucket.*—Patented October 18th, 1853.

Claim.—The folding life-preserving seat, with a buoyant divided top. Also, the clasp, in combination with the surfaces on which it slides, operating to hold the stool either shut or open.

No. 10,142.—Thomas E. Warren, of Troy, N. Y.—*Iron Carriage-Bodies for Railroads and other purposes.*—Patented October 18th, 1853.

The specification describes this car or carriage as being constructed of, or consisting of, three elements, which, united, go to form a strong, light, and durable structure. These elements form the sides, and unite all the parts, and are a series of straight panels of thin sheet-

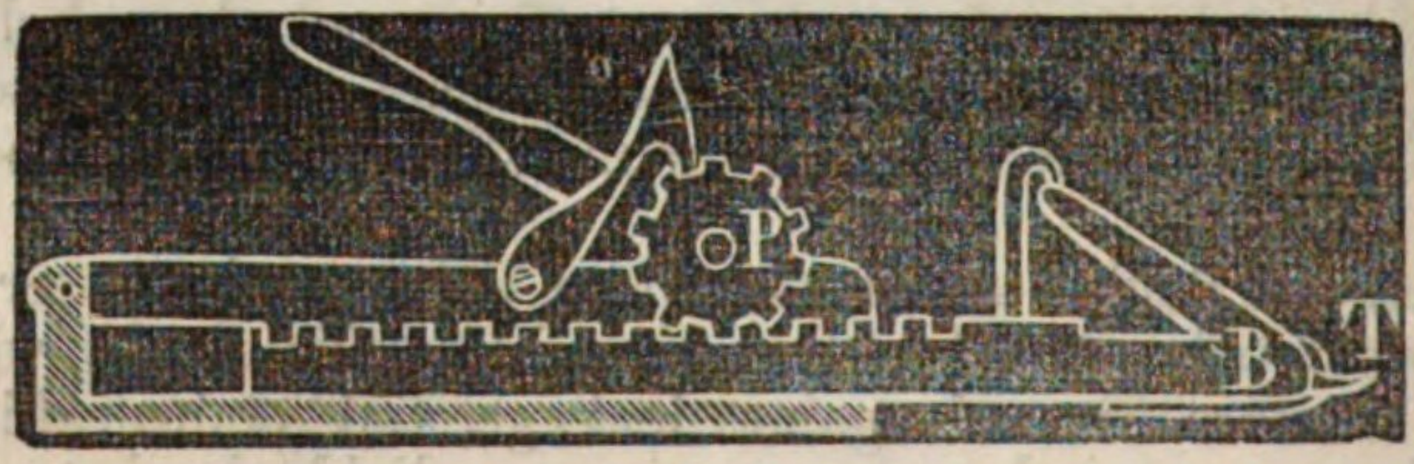




metal, which serves as diagonal braces, and columns of the same material, for strengthening the plates to which they are firmly riveted, together with bolts extending through the colums to hold the top and bottom to the sides, a service which there is not strength enough in the thin metal sides to perform, if riveted to the top and bottom.

Claim.—The combination of hollow sheet-metal columns and panels, as described, with the through bolts holding the top, bottom, and sides all firmly together, in the manner and for the purposes set forth.

No. 10,143.—J. W. Weatherby, of Kingsville, Ohio.—*Machine for Laying Carpets.*—Patented October 18th, 1853.



To make use of this machine (represented in the figure), one corner of the carpet is first fastened in its place, and then the teeth T, at the point B, are inserted in the opposite end of the carpet, and the end of the stock A is placed against a board reaching the opposite side of the room. By turning the pinion P, the rack is pushed out, and thereby the carpet may be held to any desired tension, until one whole side or end is secured.

Claim.—The general construction and arrangement of the carpet-stretcher, made and operated as described.

No. 10,144.—Linus Yale, of Newport, N. Y.—*Improvement in Locks.*—Patented October 18th, 1853.

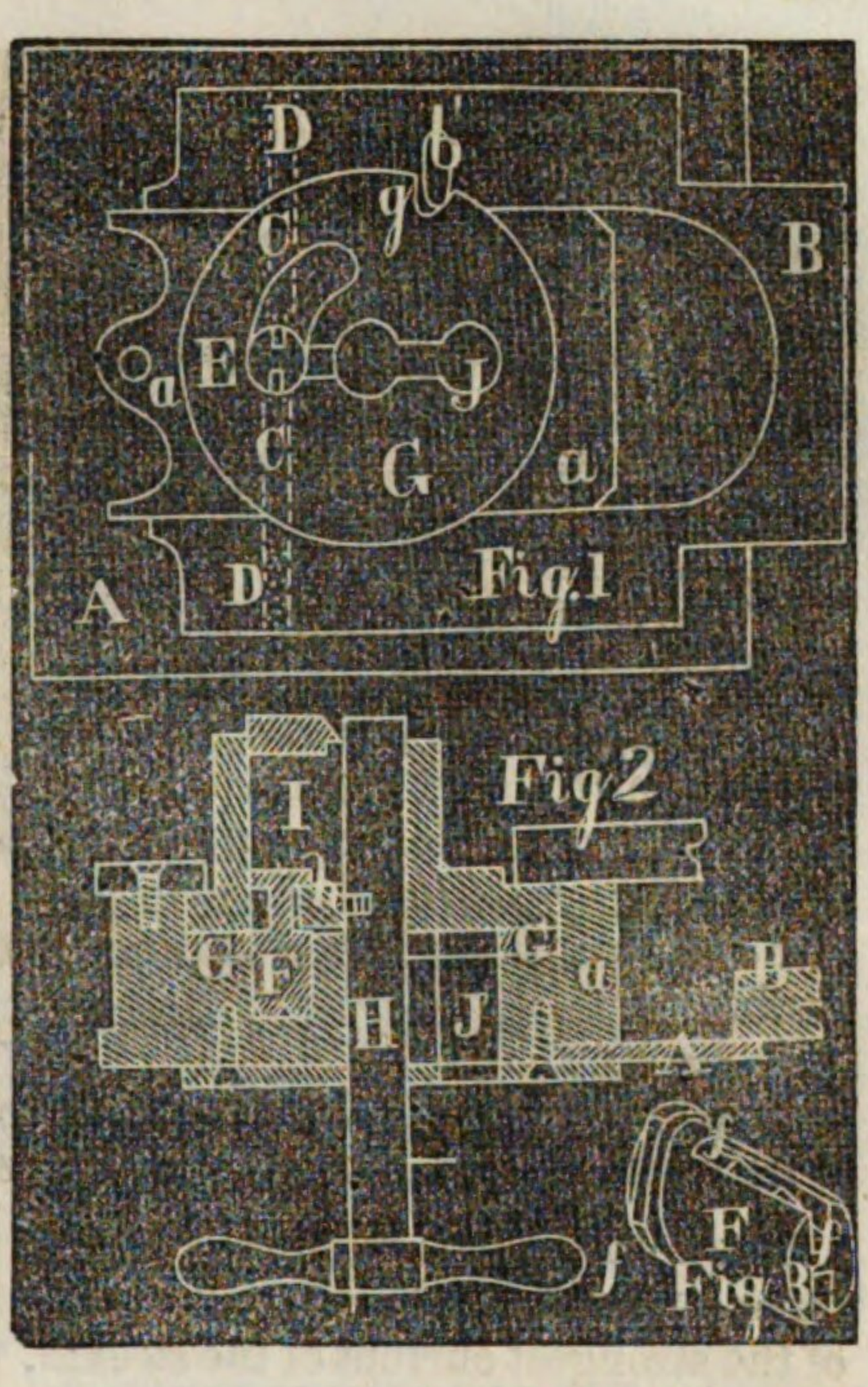
The distinguishing feature of this lock is the manner of applying the key to very simple and efficient stops, so situated that they cannot be approached by any means with an instrument subject to the control of the burglar or other operator.

On the front plate A is a projection *a a*, astride of which is fitted to slide a crotched bolt B running close at the sides, making an easy

movement to stop or lock by divided pins c c driven across the joint by spiral-springs D D, and projected into the key-hole E, there to be adjusted by the planes *f f* on the key F (fig. 3).

Behind the wheel G is a revolving key-chamber I, through which the wrench H also passes. The wrench, in revolving, moves first the key-chamber, and then the wheel G (having a notch *j* to catch pin *b* on bolt B—*h* being a cog-arm), and in its end movement carries the key into the chamber, and then draws it from the chamber into the key-hole, and arranges the stops for the passage of the bolt.

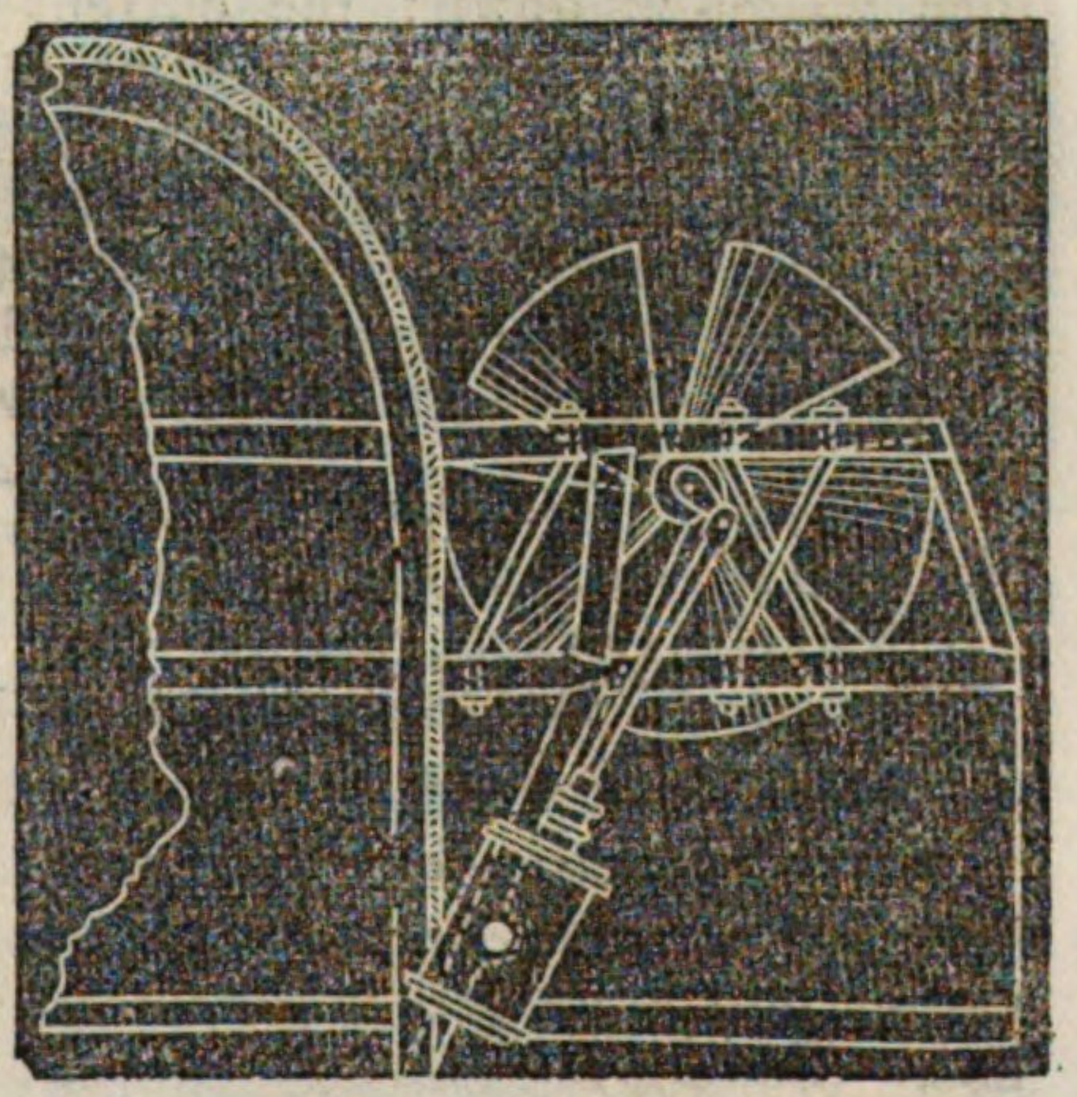
Claim.—Introducing and applying the key from behind, instead of in front as is usual, by means of a permanent wrench, revolving key-chamber, and the passage J.



No. 10,145.—HARRY WHITAKER, of Buffalo, N. Y.—*Improvement in Propellers.*—Patented October 18th, 1853.

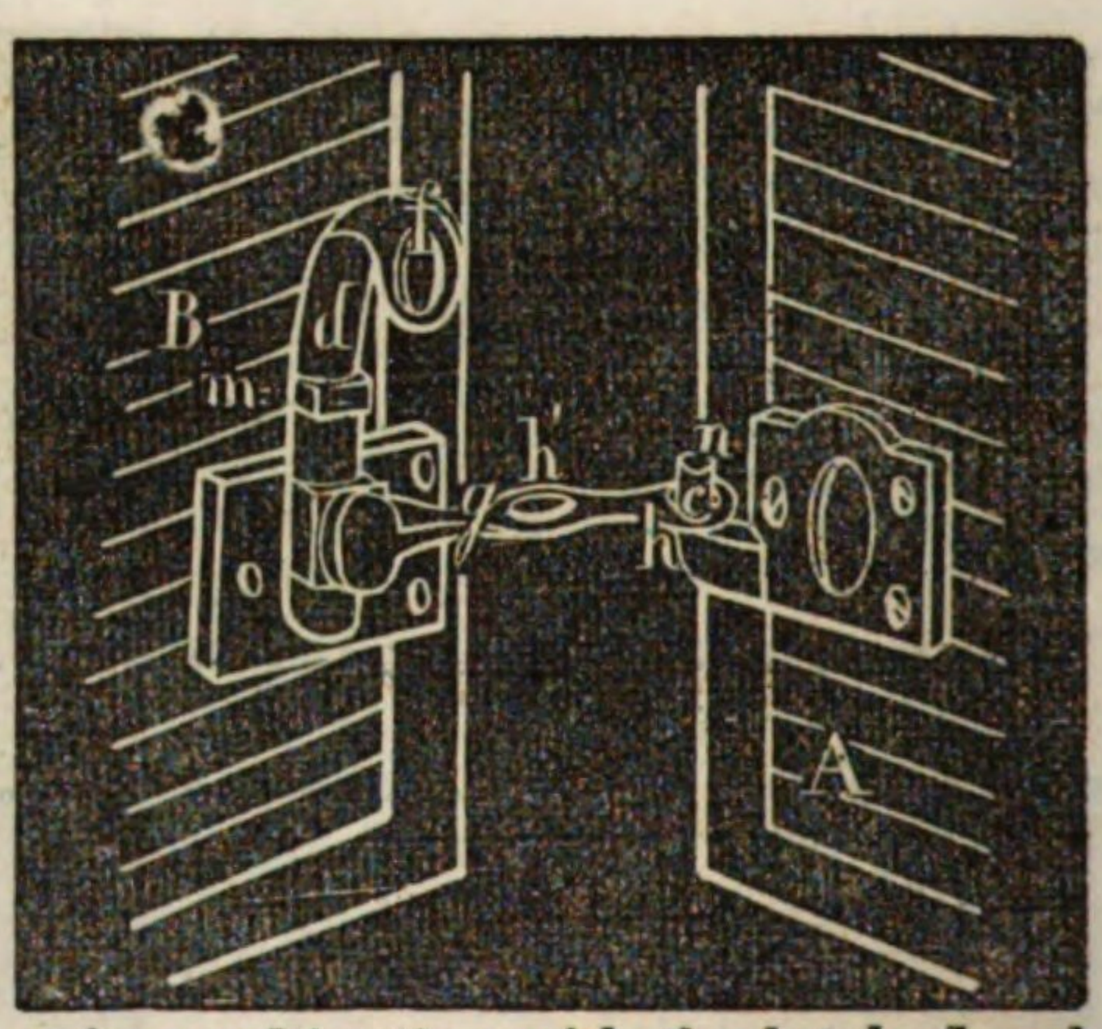
The annexed figure illustrates the arrangement and application of this improvement.

Claim.—The direct application of the crank outside of the hull to side-screw propellers, when such application is combined with, or effected by, a high-pressure engine, arranged also outside of the hull, substantially as set forth.



No. 10,146.—CALVIN ADAMS, of Pittsburgh, Pa.—*Improvement in Window-shutter Fastener and Holder.*—Patented October 25th, 1853.

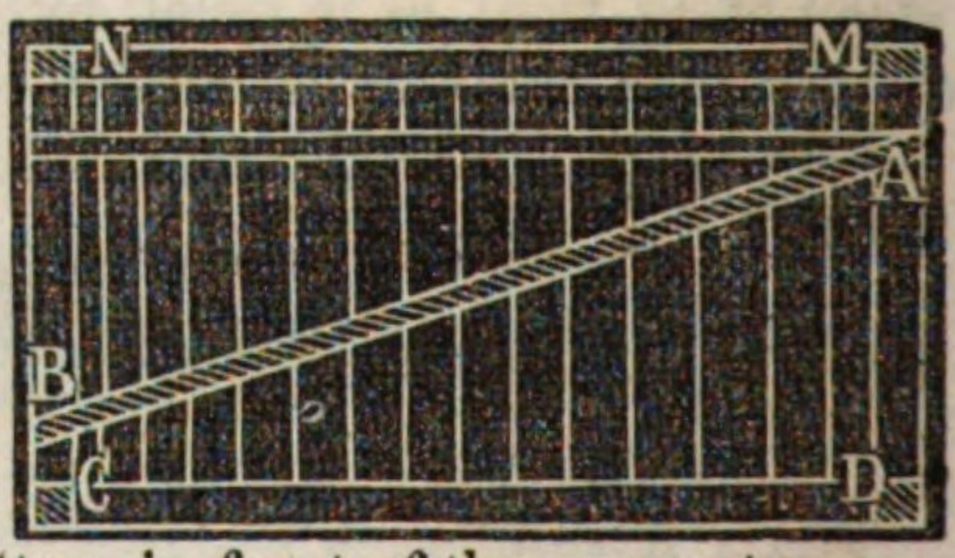
This invention consists in combining with a latch or bolt of a shutter-fastener a device for securing the shutters in a partially opened position. *g* is an arm firmly attached to arm *d*; A and B, the two shutters in a half-opened position: when to be entirely shut, *f*



is drawn back a little, so as to lift *h* above *c*; shutter A is opened a little further, so as to let arm *g* pass below *n*, by drawing *f* forward; then the shutters are shut and latched by turning *f* entirely down, until the back part of *d* comes to rest on plate *v*, and *m* on the back part *n* of pin *c*.

Claim.—The combining with the latch or bolt of an inside shutter-fastener a contrivance for securing the shutters in a partially opened position, by means of the rings *f h h'* and the arm *g*, in combination with the latch *d* and pin *c*, substantially in the manner and for the purpose herein before set forth.

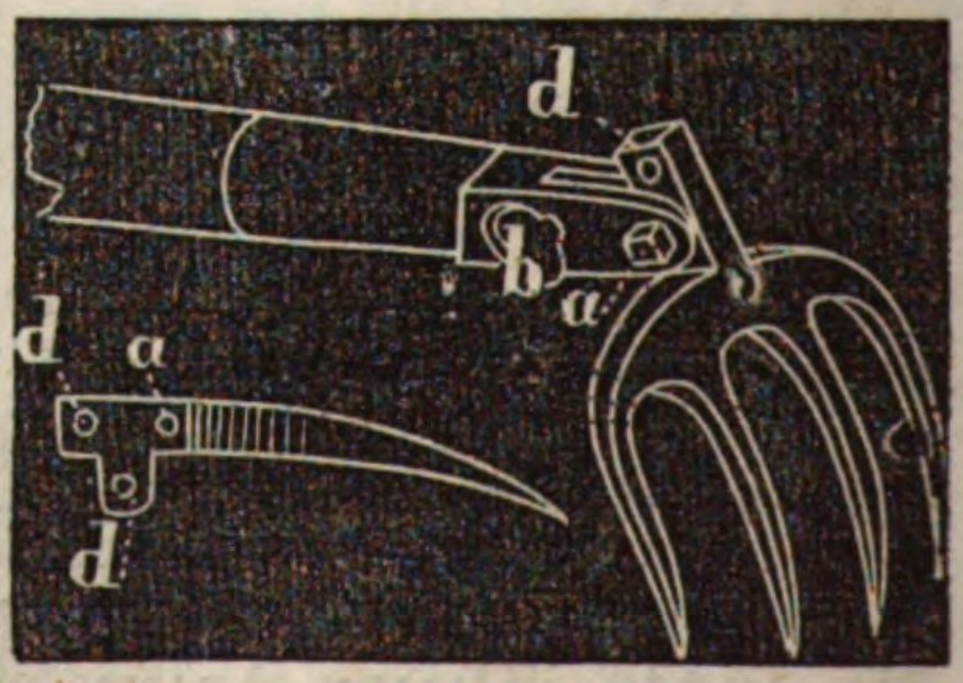
No. 10,147.—G. T. BEAUREGARD, of New Orleans, La.—*Improved Self-acting Bar-Excavators.*—Patented October 25th, 1853.



The excavator is anchored at the inner edge of the bar in the thread of the strongest current of the stream. The top of the frame N M C D is then weighted down; the current near the upper surface enters at A D, and forces itself out of the smaller aperture B C with an increased velocity, and thereby excavates the bottom in front of the excavator.

Claim.—The bar-excavator, in which the surface current, by means of the inclined plane, is deflected downward, and made to act upon the bar.

No. 10,148.—EZRA H. DAWES, of Litchfield Corners, Maine.—*Improvement in Dung-Forks.*—Patented Oct. 25th, 1853.

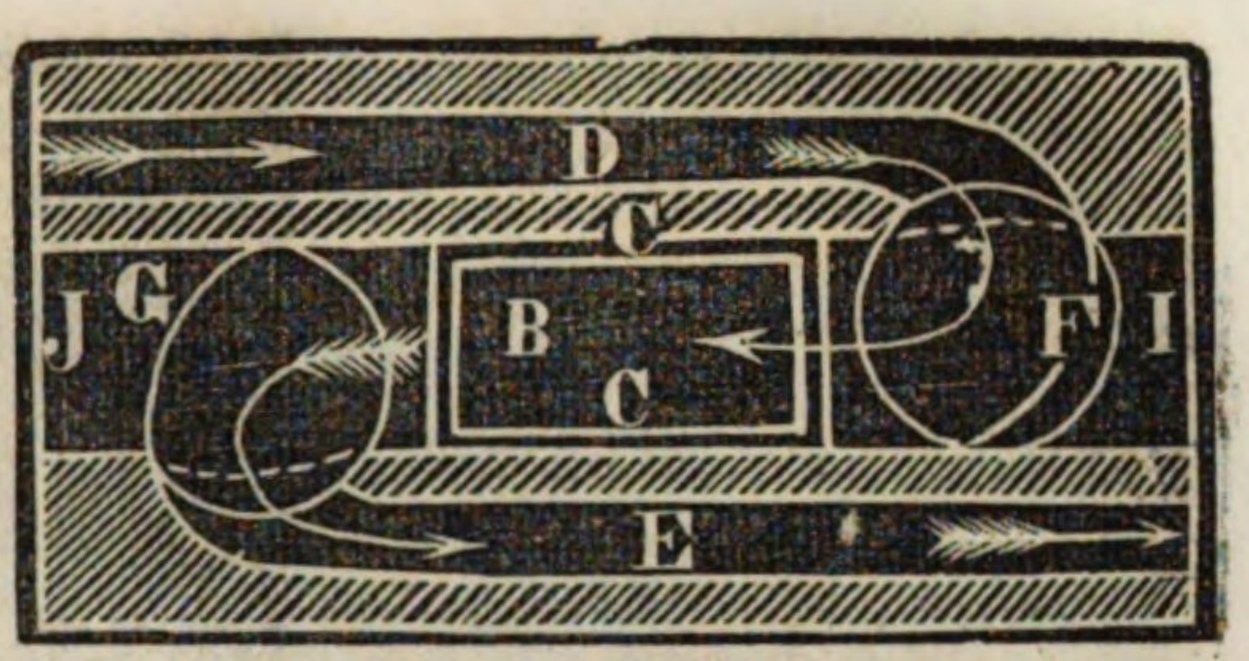


The construction of this fork is such that it may be readily converted into a garden cultivator or hoe. (See fig.)

Claim.—Making the tines of ordinary dung or hay forks to revolve upon the handle, in the manner and for the purpose set forth.

No. 10,149.—FREDERIC P. DIMPFEL, of Philadelphia, Pa.—*Improvement in Propelling Vessels.*—Patented October 25th, 1853.

The propeller represented in the figure is arranged to work below the keel or bottom of the ship; it may also be arranged to work at

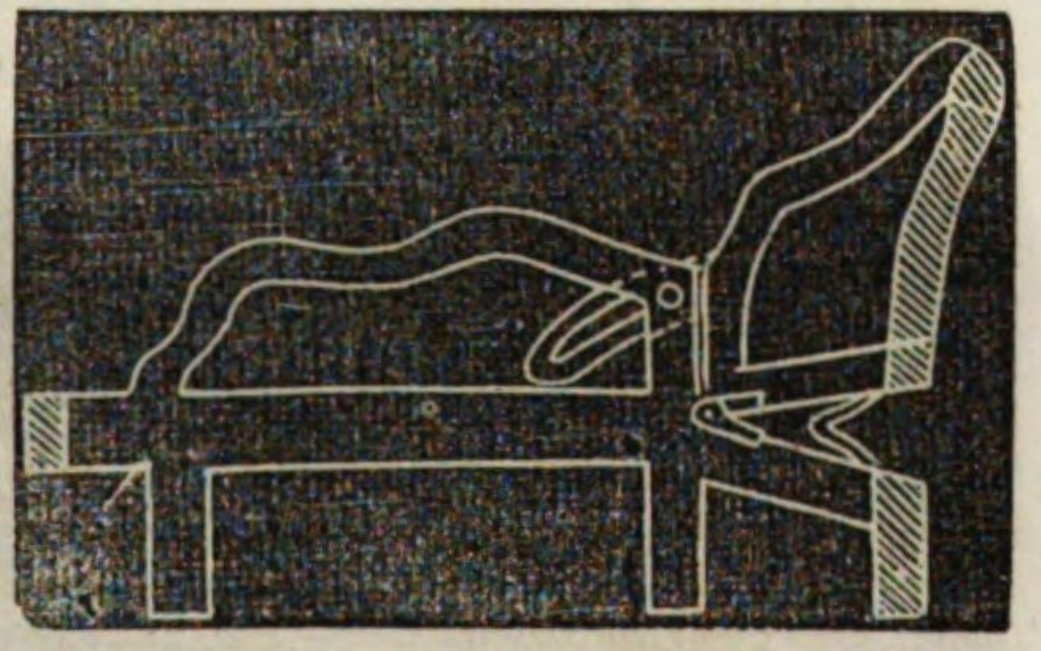


the sides or other portions of the vessel below the surface of the water.

The piston B is set in a reciprocating motion by being connected with a steam-engine, which is situated above it. This propelling-piston B is placed within an oblong chamber C that communicates on its opposite sides, and at or near its opposite ends, with water passages D and E, which also run parallel to the keel; and one pipe or passage D is open at its end next to the bow of the ship, while the open end of the other pipe E faces the stern of the vessel. Valves F and G are situated near either end of the reciprocating piston-chamber at the points of connection of the water passages D and E with the said chamber.

Claim.—The arrangement of the water passages, apertures, and valves, in combination with the reciprocating-piston and its chamber, substantially in the manner and for the purposes set forth in the specification.

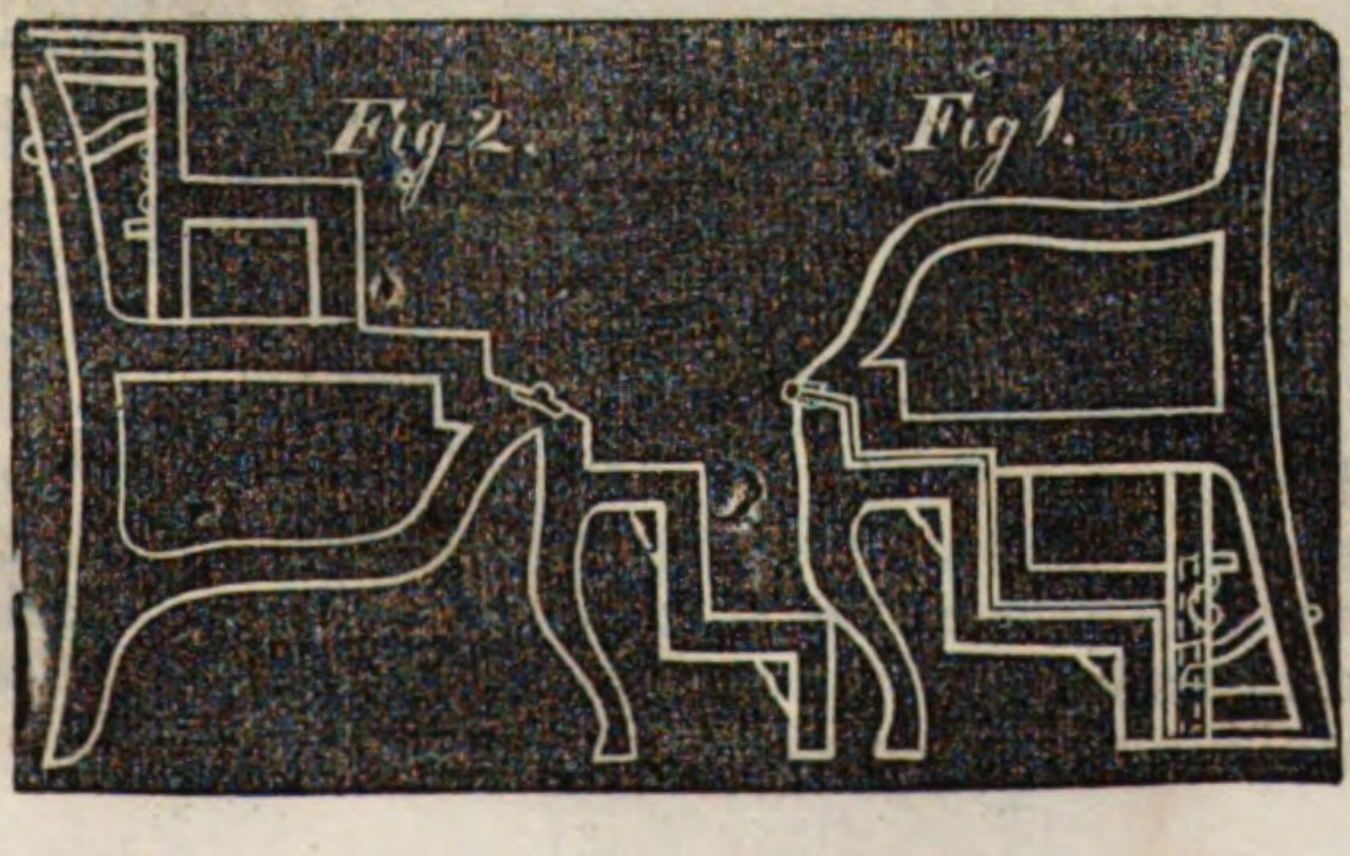
No. 10,150.—Augustus Eliaers, of Boston, Mass.—*Improvement in Lounges.*—Patented October 25th, 1853.



The figure and claim show the construction and nature of this improvement.

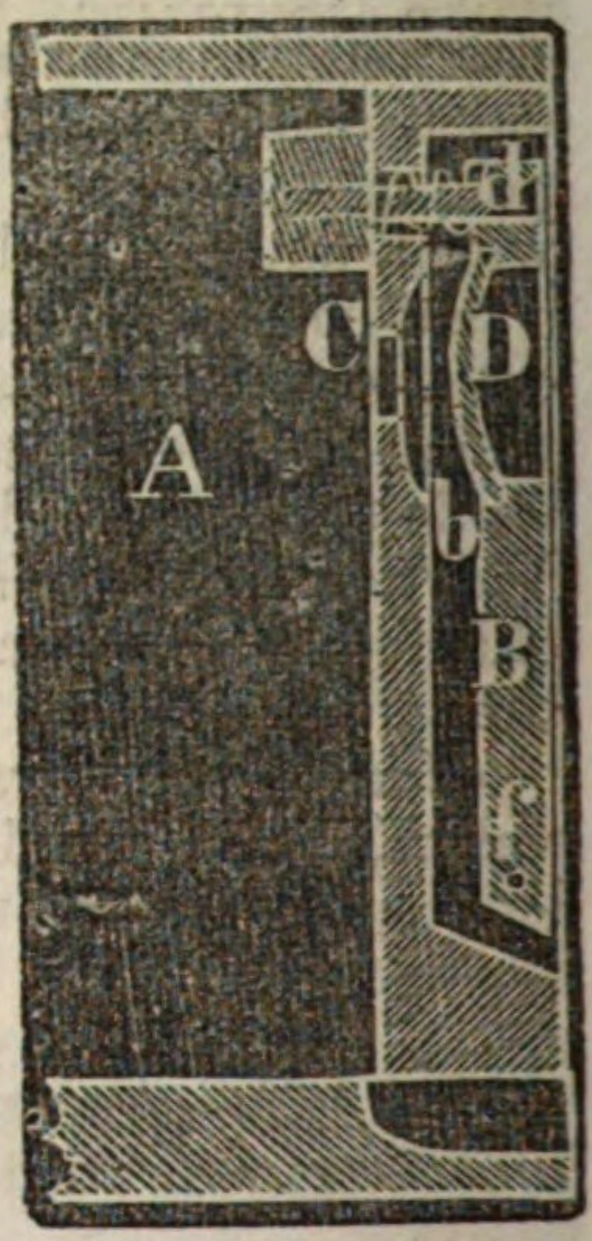
Claim.—Resting the part which forms the support to the upper part of the body in lounges, or other similar articles of furniture, upon springs and hinges, so as to vary its inclination at the pleasure of the occupant, the said support being fastened and held in any desired position by a set-screw and curved arm, as above set forth.

No. 10,151.—Augustus Eliaers, of Boston, Mass.—*Improved Library Step-Chair.*—Patented October 25th, 1853.



Claim.—A library step-chair, or a chair which may be changed at pleasure into a flight of steps, in which the fold or hinge of the two parts is formed in the top or an extension of the front legs of the chair, thereby permitting the seat to be so stuffed as to form an ornamental and comfortable chair, and, when opened, to form a flight of five steps.

No. 10,152.—Wooster A. Flanders, of Sharon, Vt.—*Improvement in Bee-Hives.*—Patented October 25th, 1853.

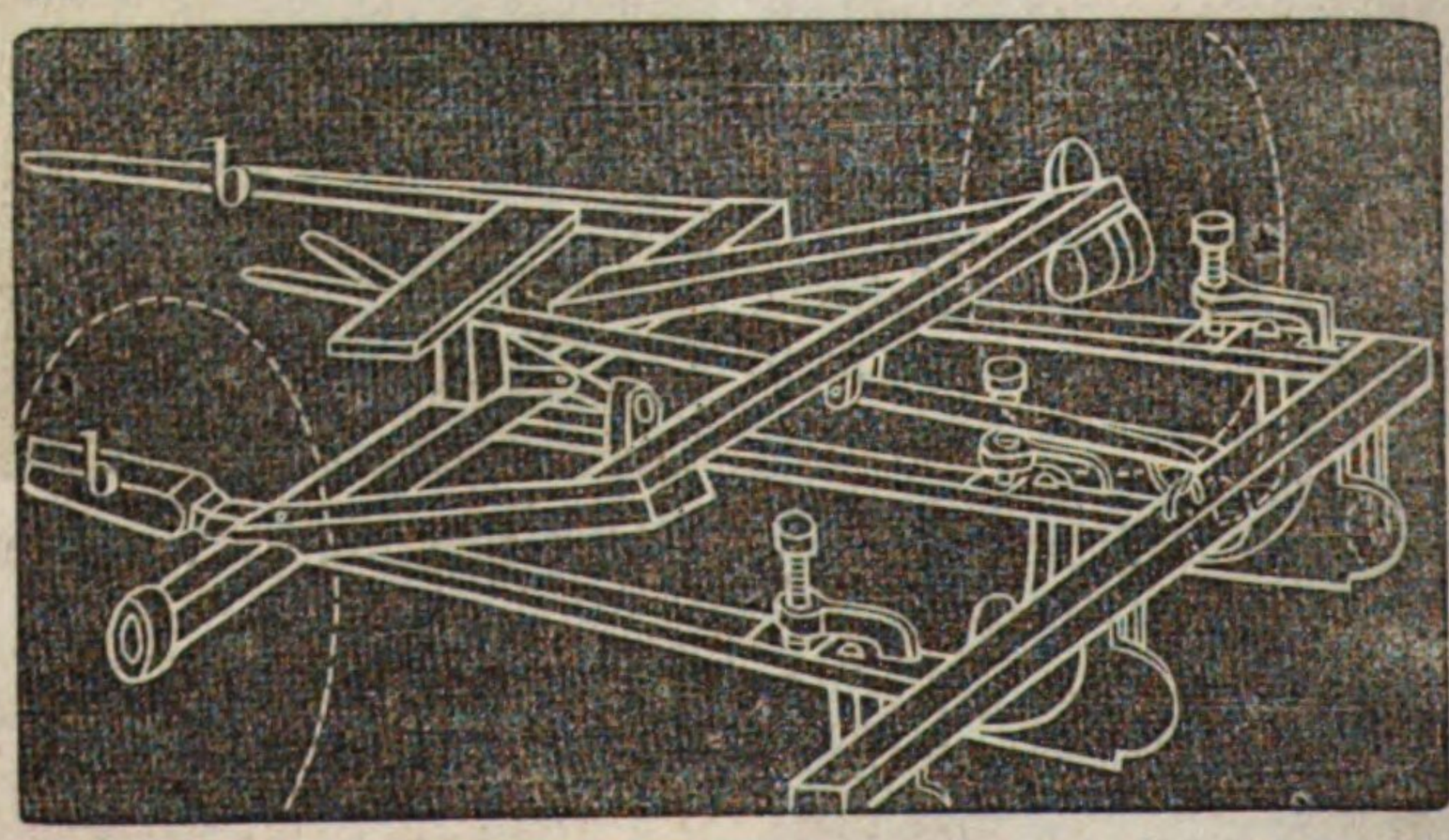


b is an extra passage adapted to the hive, and capable of being gauged, so that, while the working bees are permitted to pass and repass without hinderance, the passage is not sufficiently large to permit the queen to leave the hive. A is the interior of the hive; *d* is an adjustable screw. Plate B is hinged to the hive at *f*; D, glass; C, aperture.

Claim.—The adjustable passage *b*, by which the entrance to the hive may be enlarged or diminished.

No. 10,153.—J. D. Filkins and William H. De Puy, of Lima, Ind.—*Improvement in Hitching Horses to Ploughs.*—Patented Oct. 25th, 1853.

This apparatus is shown in the annexed figure.

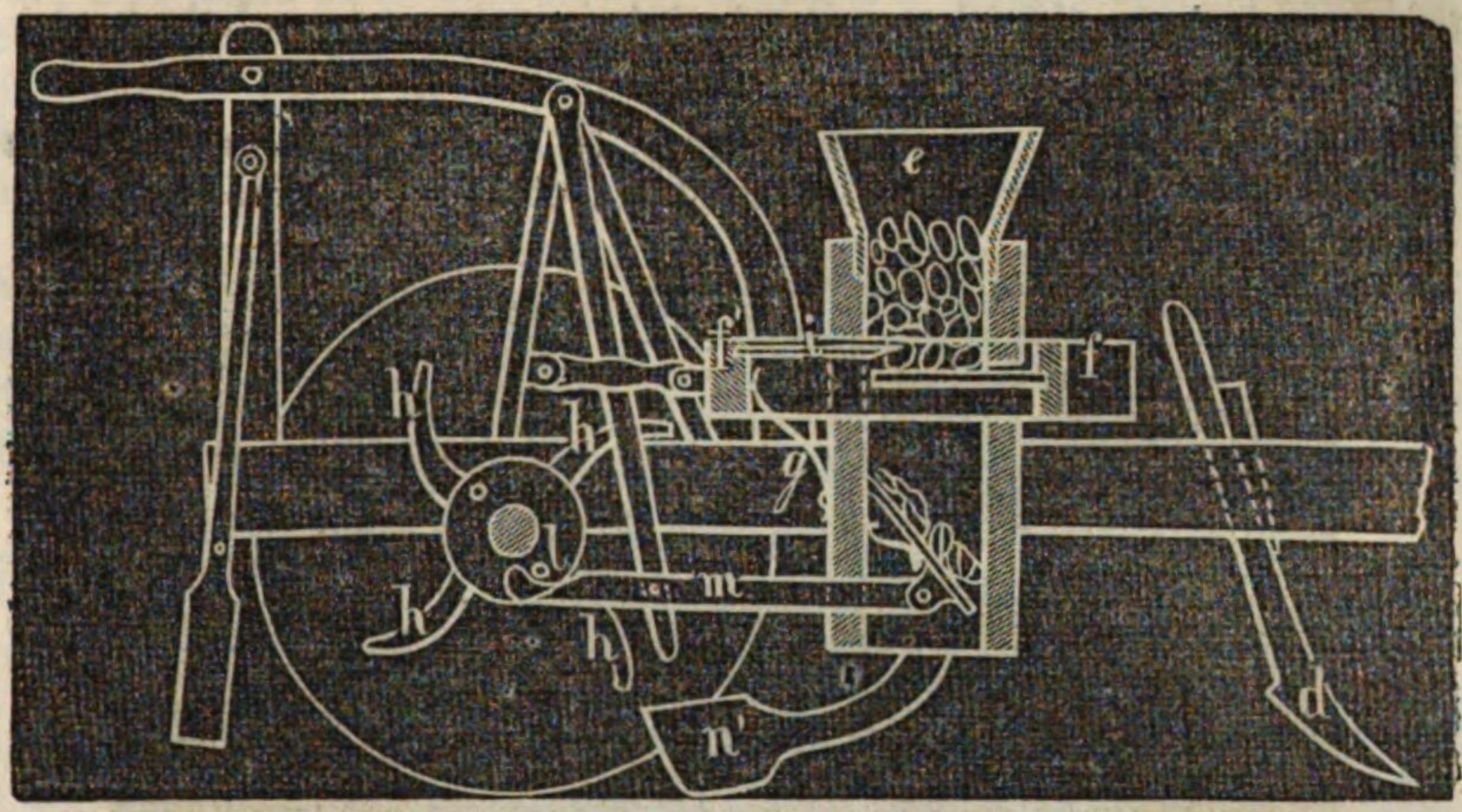


Claim.—The combination of the limber tongue *b'* and stiff tongue *b* with the running gear, to adapt the gang-plough to being drawn by two teams abreast.

No. 10,154.—Samuel Hutchinson, of Rockport, Ind.—*Improvement in Cutting and Planting Potatoes.*—Patented October 25th, 1853.

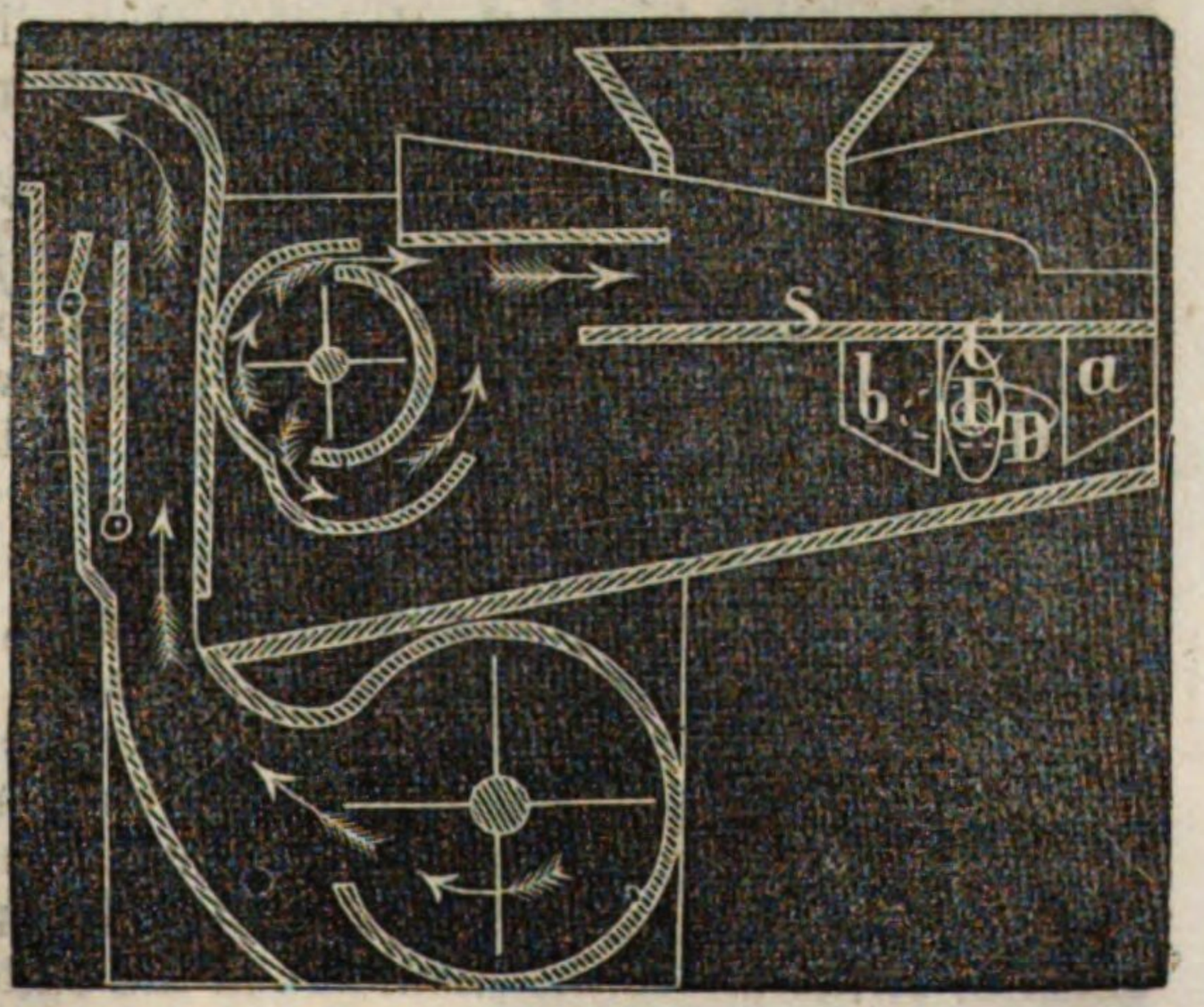
In the figure, *d* represents the share; *f f*, a sliding floor, which carries the knife *i*; *g*, a spring, which presses the sliding floor back; cams *h h*, on the axle of the wheels, press the sliding floor forward. K, trap-door, which is set in a reciprocating motion by the pin *l*, striking against the rod *m*; blades *n'* scrape the earth back over the pota-

toes after they have been dropped. There is also a pin to hold the trap-door permanently back; if desired, a ratchet and pawl prevents the return movement of the wheels.



Claim.—The construction and combination, as described, of cam, sliding-platform, cutting-blade, and trap-doors, with the furrowing-share and covering-blade, for the purpose of cutting, dropping, distancing, and covering potatoes.

No. 10,155.—David S. Mackey and Jarvis R. Smith, of Batavia, N. Y.—*Improvement in Winnowers.*—Patented October 25th, 1853.

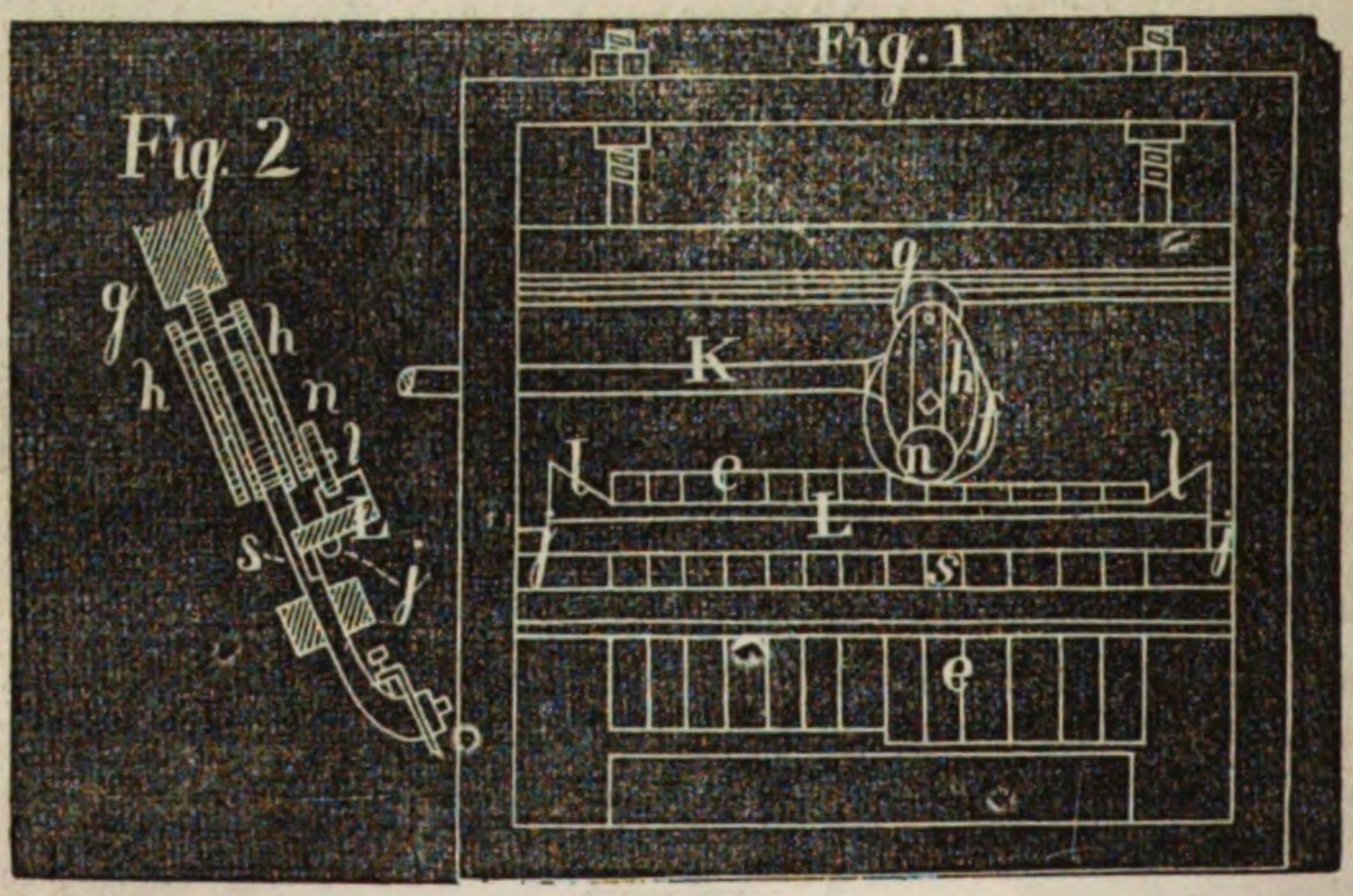


The nature of this invention consists in the manner of operating the screens, by means of two eccentrics working between blocks attached to the under side of the screens, and in having two blasts proceed from a single fan, the blasts crossing each other, and being so arranged that the grain is subjected to one of the blasts before passing through the screen, while the other blast prevents the screen from being clogged with chaff and other matter. (See fig.) The eccentrics C and D are set on the same shaft; C works against block *b*, and D against block *a*, which blocks support the screens.

Claim.—The peculiar manner of operating the screen; viz., by means of the eccentrics C D placed in a reversed manner upon the shaft E, and working between the blocks *a b* attached to the under side of the screen, as shown and described.

Also, producing two blasts from a single fan, and having the two blasts cross or intersect each other, by which a blast passes horizontally over the top of the screen, and a blast also passes upward through the screen, preventing the screen from being clogged or choked.

No. 10,156.—E. G. MATTHEWS, of Troy, N. Y.—*Improvement in Machines for Dressing Stone.*—Patented October 25th, 1853.



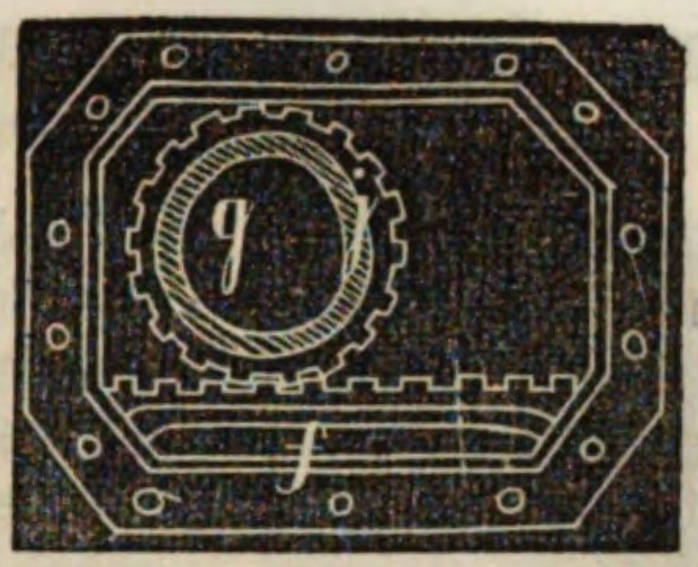
The rocking-bar L is hung in journals *j*; and when the roller *n* strikes the inclined plane *l* on its end, the front edge of bar L will be depressed, and consequently the rear edge will be raised; and as this rear edge fits into the shoulders *s* of the cutter stocks *e e*, these will be raised.

Claim.—The driving-apparatus for driving the cutters: said apparatus being constructed of the driving-wheel *f* and friction-wheel *g* in the frame *h h* attached to the driving-rod K, by means of which rod a reciprocating motion is given to the frame, which causes the driving-wheel to roll back and forth on and over the heads of the cutter stocks, thereby causing the cutters to make the desired cut in the stone, the friction-wheel meanwhile rolling on the periphery of the driving-wheel, and also in a groove in the cross-bar. Also, the rocking-bar L, with inclined planes at each end, in combination with the cutter-stocks *e* and roller *n*, or its equivalent, attached to the frame *h* of the driving-apparatus, for the purpose of rolling or striking on the inclined planes of the bar as the driving-apparatus reaches the end of its stroke, so as to rock or tip the bar, thereby causing the inner edge of the bar to catch or strike under the shoulders in the cutter-stocks, and raise them up in position for the driving-wheel to act upon them in its return stroke.

No. 10,157.—CHARLES PERLEY, of New York, N. Y.—*Improvement in Ships' Side-Lights.*—Patented Oct. 25th, 1853.

The nature of this invention consists in the use of a circular glass or light *g*, inclosed by a circular frame, on which are teeth gearing

into a fixed rack on the inside of a metal box that is let into the side of the vessel. To open the light, it is rolled to one side within the box; and when it is to be closed, the light is rolled back again, and a screw-ring forced into an elastic packing *j*, in the frame of the glass. Any water that may by accident run into the box can escape by a small hole *f*.



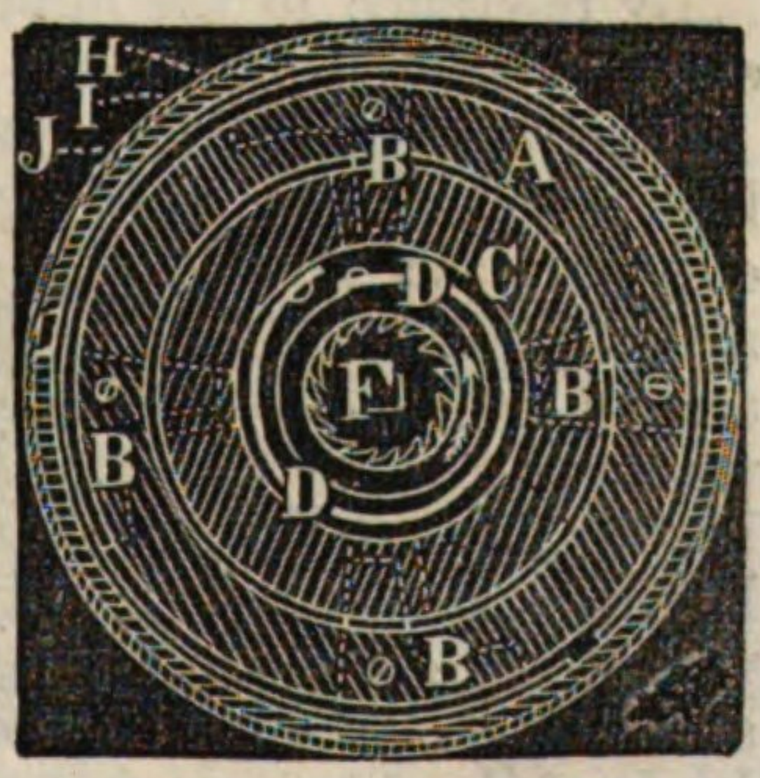
Claim.—The means herein described and shown for preventing any leakage from a side-light passing into a vessel, by inclosing the side-light in a metallic box let into the side of the vessel and provided with a small hole or holes to pass out the leakage, as specified.

No. 10,158.—ALPHONSE QUANTIN, of Philadelphia, Pa.—*Improvement in Valve-Gauge for Bottles.*—Patented Oct. 25th, 1853.

The figure shows the mode in which this gauge is arranged and operates. D is a weight upon the rod which connects the two valves; as the bottle is inclined the liquid fills the space between the two valves, and the weight, sliding by the inclination of the bottle, closes the lower valve, and at the same time opens the valve at the mouth of the bottle, thus permitting no more of its contents to escape than what is contained between the two valves.

Claim.—The above-described machine or gauge, with the arrangement of the valves, one opening by the act of closing the other, so as to pour out of the vessel to which the gauge is attached only the quantity of liquid contained in the space between the two valves.

No. 10,159.—HENRY L. RUSSELL, of Hudson, Mich.—*Improvement in Metallic Piston-Packing.*—Patented Oct 25th, 1853.



See figure.

Claim.—Expanding the metallic bands H I J, which encompass the drum A, by means of the levers B, placed in the periphery of the drum A, and operated by means of the ring C within the drum; the ring C being prevented from moving casually by means of the coil-spring D, and ratchet F, and pawl *g*, or their equivalent.

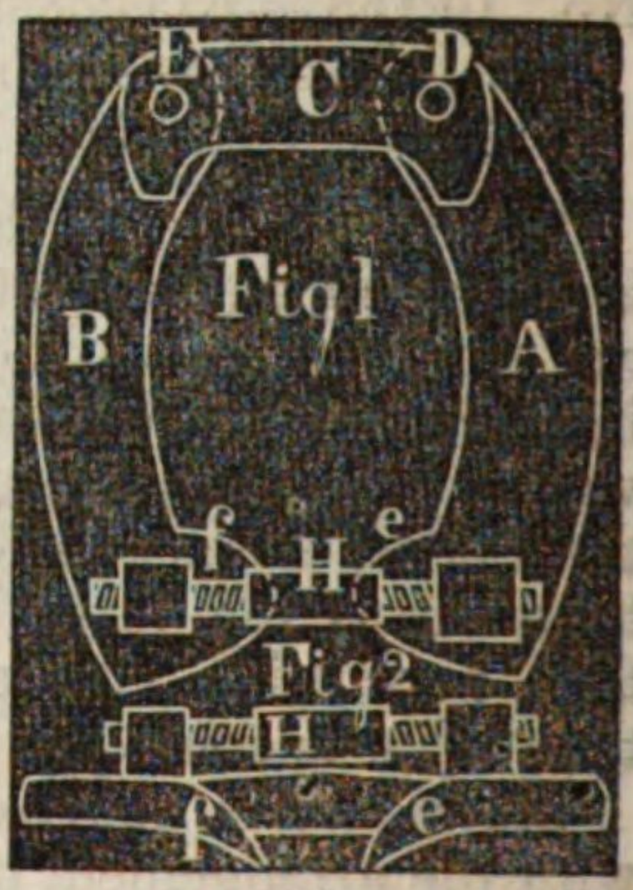
No. 10,160.—William W. Richards, of Philadelphia, Pa.—*Improvement in Shovels, Spades, &c.*—Patented Oct. 25th, 1853.

The object of this invention is to obtain a greater degree of toughness, strength, and sharpness in these utensils than heretofore.

The manner of construction is as follows: on one or both sides of a slab of steel is placed a slab of iron; these slabs, called a "pile," are first heated to a welding heat, and then hammered or rolled into sheets.

Claim.—As a new manufacture, shovels, spades, and other implements made of a composite sheet of metal, whose constituents are parallel laminæ of unequal hardness, as herein set forth.

No. 10,161.—Benjamin P. Sargent, of Sutton, N. H.—*Expanding Horseshoe.*—Patented Oct. 25th, 1853.

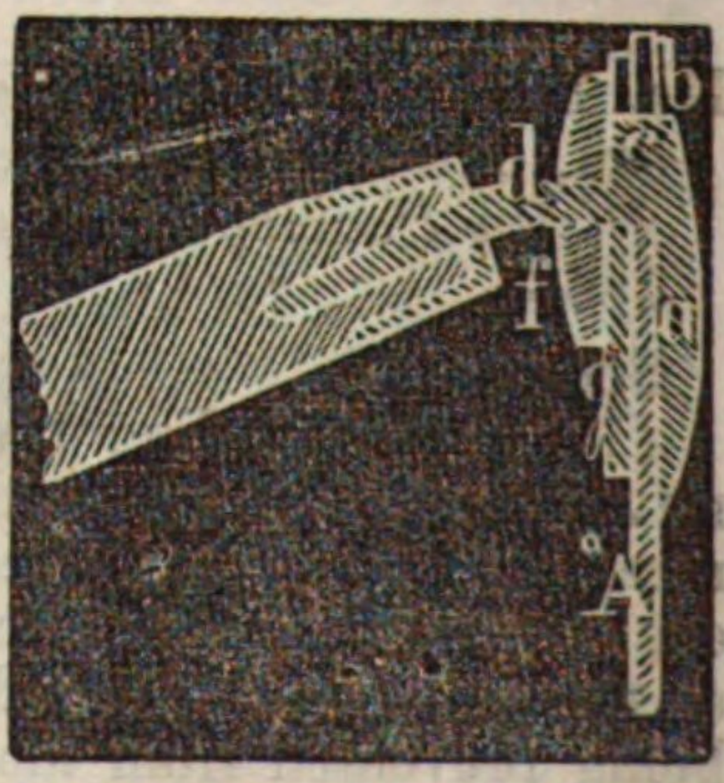


This invention is intended to prevent the contraction of the frog, or heel part of the hoof of a horse.

The shoe is formed in separate parts, and connected by joints D E, and may be contracted or expanded by the screw H.

Claim.—The combination of the bearers or ears *e f* with the jointed quarters or bars A B, jointed together or to a common toe-piece or cork C, and operated by an expansion screw, as specified.

No. 10,162.—Jacob T. Sargent, of Sutton, N. H.—*Improvement in Garden and other Hoes.*—Patented Oct. 25th, 1853.



By reference to the figure, the claim will explain this improvement.

Claim.—The improved attachment of the blade and shank, whereby the blade not only can be readily removed from or as readily confined to the shank, but when affixed to it is prevented from breakage where the greatest leverage or strain is brought upon it; meaning to claim the bearing-head A, fixed firmly to and making part of the shank; the movable plate or stiffener *g*, or its eqivalents (applied to the back of the blade and made separate from the shank); the screw *d*, on the shank; the screw-nut *f*, and the recess *b*, in the hoe-blade, as combined together, and with the shank of the handle, and made to operate substantially as specified.

No. 10,163.—David M. Smith, of Springfield, Vt.—*Improvement in Clothes-Pins.*—Patented Oct. 25th, 1853.

The claim and figure explain the nature of this improvement.

Claim.—The arrangement of the line-opening D, and the spring *c*, on opposite sides of hinge *a*, of the two levers A B; whereby, by pressure of the longer legs of the levers between the thumb and fingers of the hand of a person, the instrument is rendered very convenient of application, without danger during the same of tearing the clothes secured by it on a line

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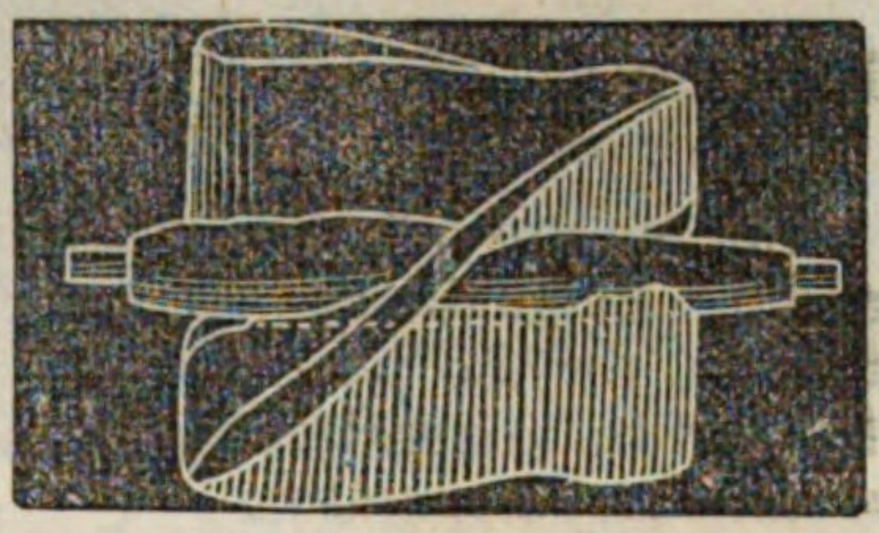
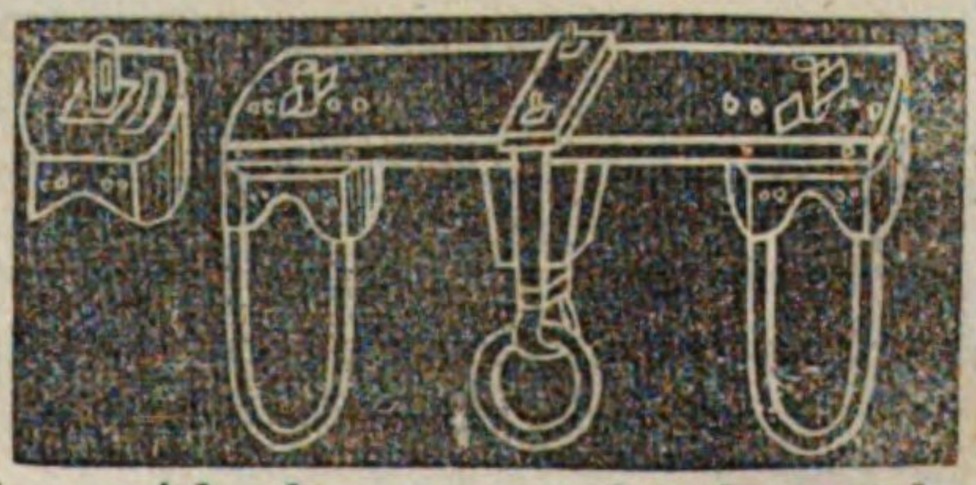
No. 10,164.—James Trees, of Salem, Pa.—*Improvement in Submerged Propellers.*—Patented Oct. 25th, 1853.



The nature of this invention consists in the application to submerged propellers (whose area where the water enters is greater than the hinder extremity, where the water escapes) of blades or vanes, and a shaft to which they are attached, all tapering from front to rear; assuming as the front of said blades and shaft that part where the blades first impinge upon the water, and where the propulsion commences.

Claim.—The combination with submerged propellers, whose area where the water enters is greater than the hinder extremity where the water escapes, of helical blades or vanes, and a tapering shaft to which they are attached; both the blades and shaft tapering from point to rear, substantially in the manner and for the purposes specified.

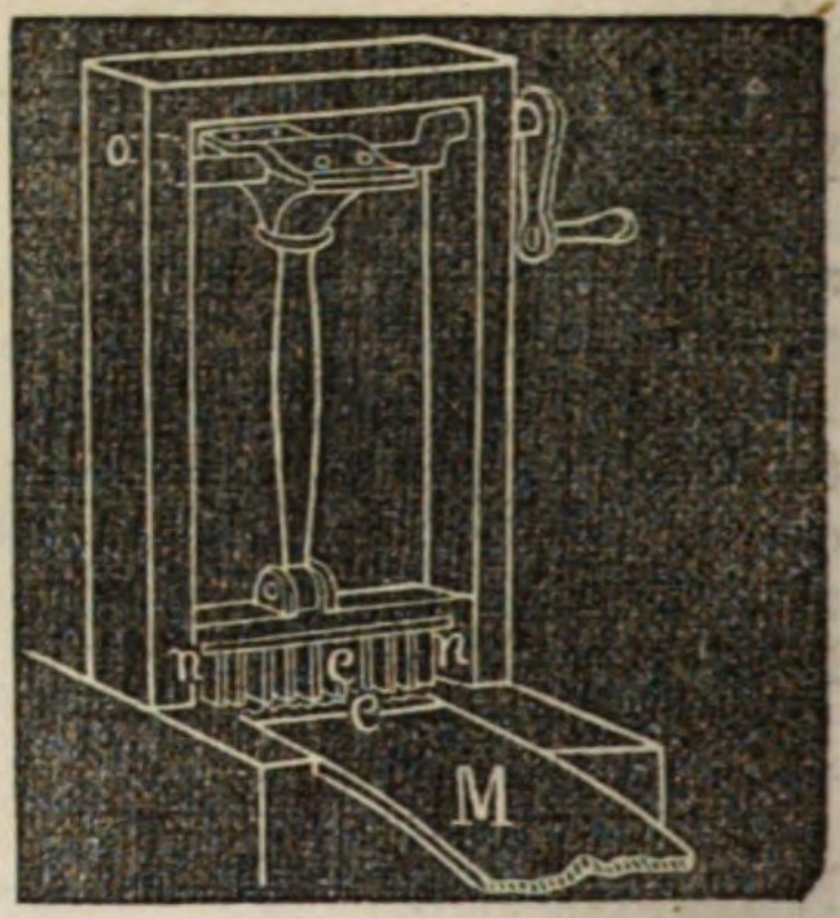
No. 10,165.—Albert Vose, of Pittsfield, Vt.—*Improvement in Ox-Yokes.*—Patented Oct. 25th, 1853.



See figures.

Claim.—The construction of the semi-revolving neck-blocks, each having a curved groove and pin fitting into it, for enabling the neck-block to always adjust itself at right angles to the direction of the neck of the animal. Also, in combination with the groove in the neck-block, the use of the pin subserving the double purpose of controlling the movement of the neck-block, and adjusting the length of the yoke.

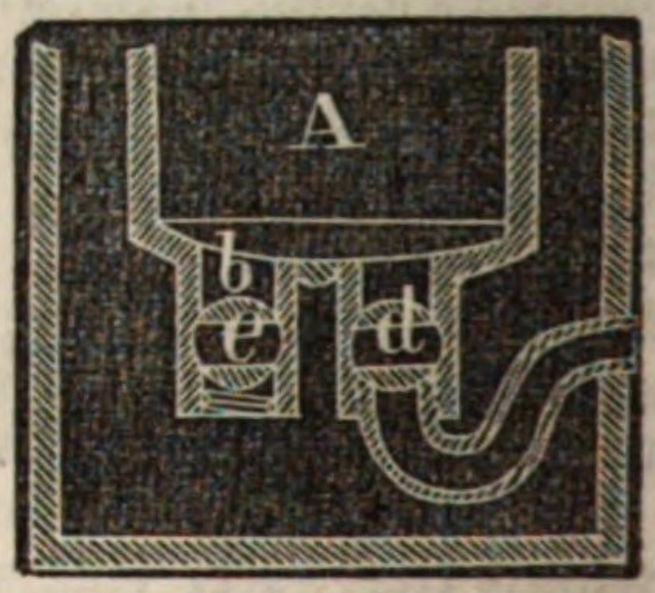
No. 10,166.—William Wheeler, of West Poultney, Vt.—*Cutting Bars and Teeth of Curry-Combs.*—Patented Oct. 25th, 1853.



In the figure, M represents a strip of metal of the width of the dies *e e*, inserted between the dies for the purpose of cutting a row of teeth in the same, both on the end of the plate and on the piece or bar cut off by the descent of the jaw.

Claim.—The method of forming the bars of curry-combs by punching them out of plates; so that at a single operation a strip of the proper width for the bar is severed from the plate, and one row of teeth cut thereon, and another row upon the end of the plate for the next bar.

No. 10,167.—William Coughlan, of Baltimore, Md.—*Mineral-water Fount and Refrigerator.*—Patented Oct. 25th, 1853.

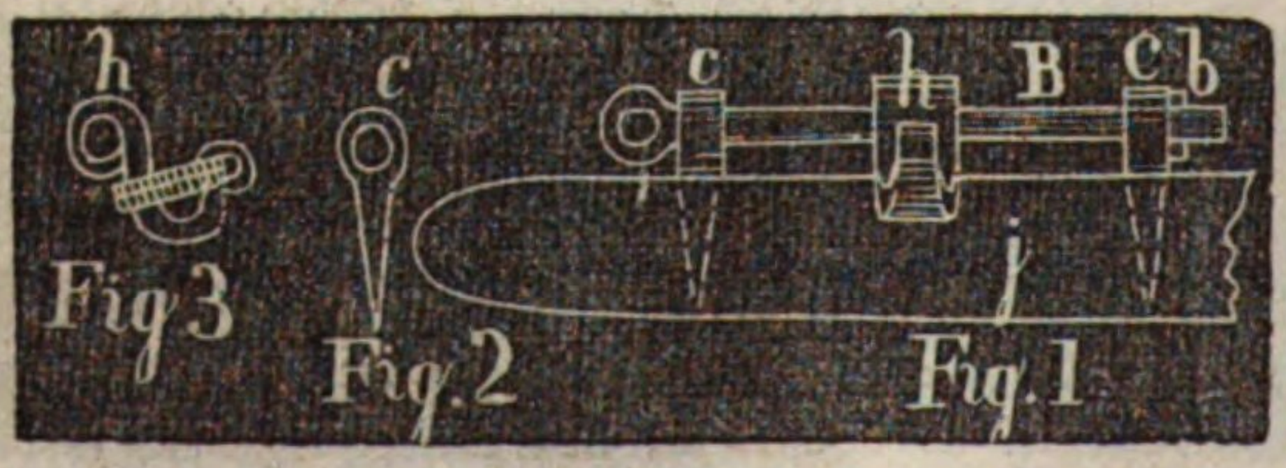


The nature of this invention consists in adding an auxiliary faucet or valve *b*, to the fount A, for the purpose of rapidly filling the fount with mineral-water already prepared in a stationary apparatus.

The spigot *d* is provided on its outer end with a female screw, to receive the end of the pipe whereby it is filled or emptied. The spigot *e* serves to pass off the superabundant gas, and thus avoids the necessity of repeatedly unscrewing the filling tube for the same purpose, and permits the fount to receive a due quantity of water.

Claim.—The auxiliary faucet or valve *b*, for the purpose of enabling the fount to be filled with prepared mineral-water.

No. 10,168.—Nelson Crocker, of Sandwich, Mass.—*Improvement in Rigging Vessels.*—Patented Oct. 25, 1853.

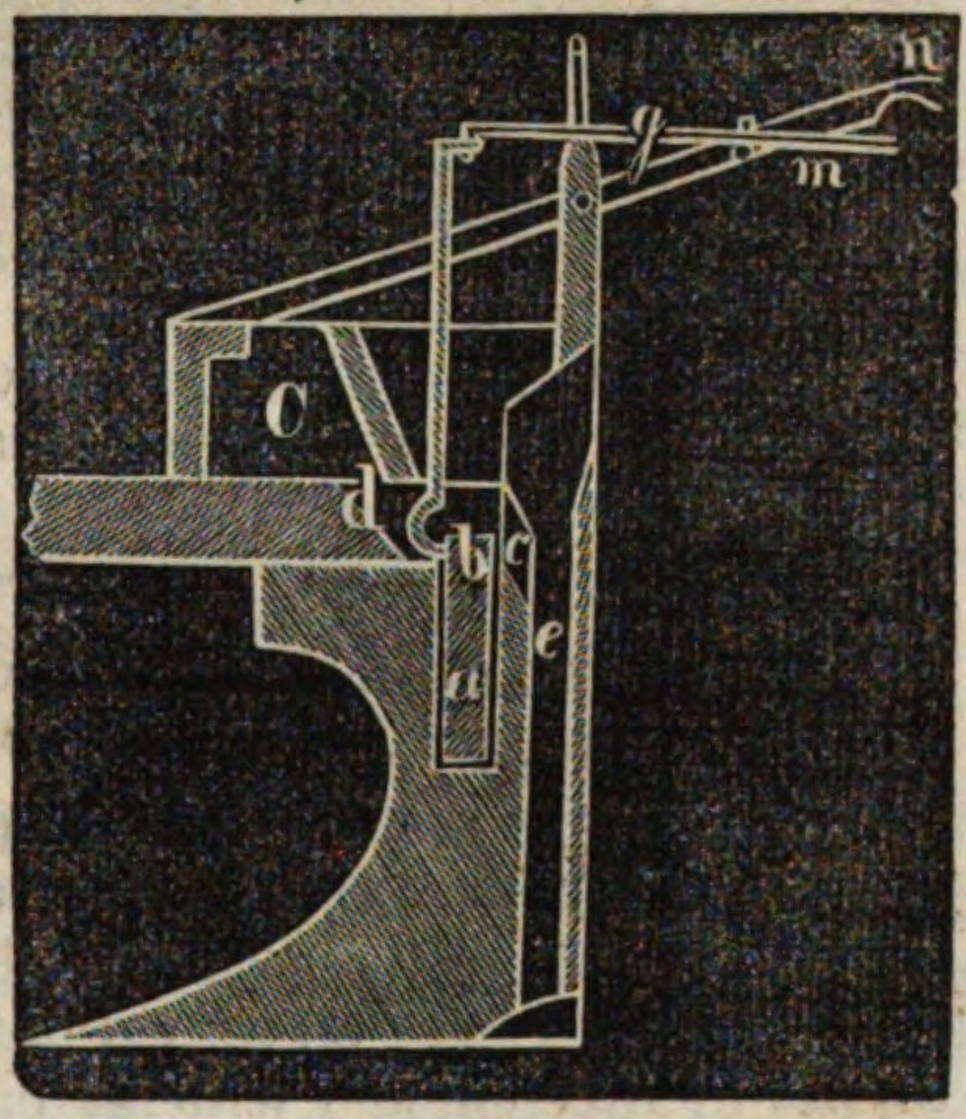


In fig. 1, *j* represents a yard, on the end of which a bolt B is secured by the two eye-bolts *c c* (which are driven into the yard), and a pin *b*; and on this bolt are one or more hooks *h*, to receive the head cringles, which are made in the usual way, but have an iron thimble worked into them. This thimble comes in contact with the hook, and

prevents the chafing of the rope. To prevent the cringle from slipping off, a mousing of spun-yarn is passed around the hook. (See fig. 3.)

Claim.—The head-cringle hooks and their fixtures, constructed and combined with rigging of a vessel, in the manner and for the purpose specified.

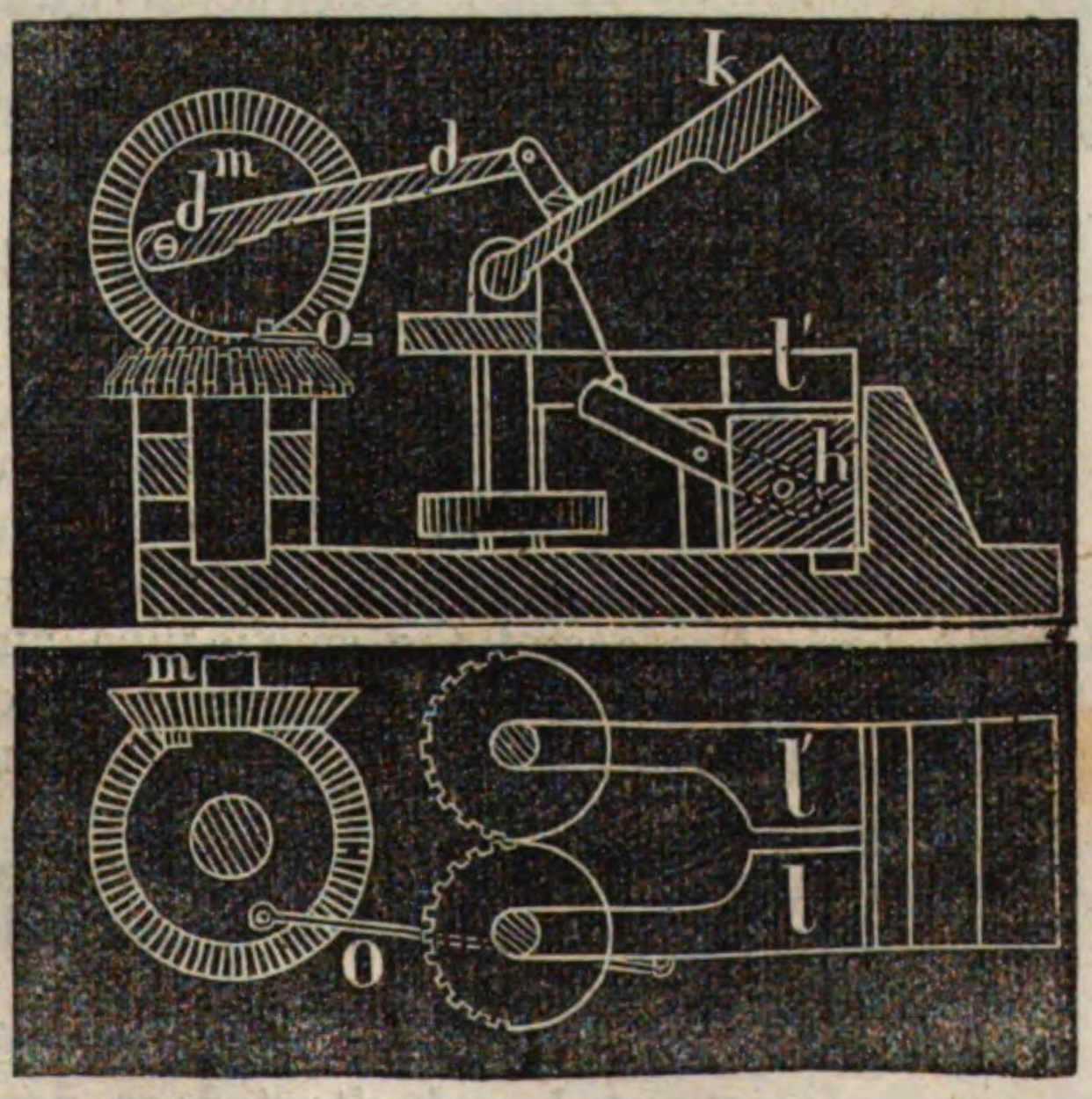
No. 10,169.—NATHAN C. DAVIS, of West Jefferson, Ohio.—*Improvement in Seed-Planters.*—Patented Oct. 25th, 1853.



In the figure, c represents the drill-box in which the corn is placed, from where it falls into depression *d*, which is kept full. The operator presses down the end *m* of the lever *g* with his thumb, at certain intervals. For convenience the lever *m* is bent towards the handle *n*, on which the hand rests. By the depression of this lever the piston *a* is lifted up through the grain, so that the kernels in the hollow *b* will fall out over the partition *c* into the aperture *e*, and to the furrow.

Claim.—The piston *a*, provided with a notch or hollow *b* in its upper end, and so arranged in combination with partition *c* and the depression *d*, that it will bring up and discharge through the aperture *e* the desired number of grains of corn every time it is raised by the operator.

No. 10,170.—DANIEL NOYES, of Abington, Mass.—*Improved Machine for Hammering Iron.*—Patented Oct. 25th, 1853.

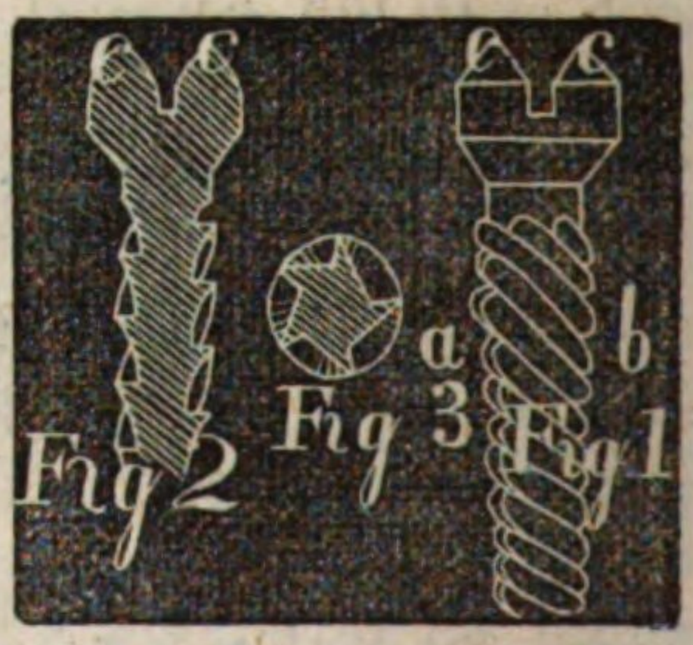


m is the wheel from which the motion is transfered to the machine; *k l l'* are the three hammers; and *h* the anvil. One of the most essential features of this machine consists in the relative position of the ends of the connecting-rods *d d*, *o o*, and the fulcra or journals of the hammer-beams at the time of giving the blow; as the journals of all the hammers are so placed as to be in nearly a straight line, at the time of giving the blow, with the connecting-rods from which they derive their motion.

Claim.—A machine for hammering iron: viz., a hammer for giving the blow upon the upper surface of the iron, acting in conjunction with two hammers which simultaneously strike the sides of the iron. Also, the use of the two side hammers, whether used in connection with the upper hammer or without it. Also, so arranging the relative position of the fulcra of the hammer-beams, and the ends of the connecting-rods attached to the beams and to the crank-shaft and gears from which they derive their motion, as to bring the fulcra and connecting-rods in nearly a straight line at the time of giving the blow, the opposite ends of the connecting-rods, just before giving the blow, moving in opposite directions, so as to give a rapid and powerful blow. Also, causing the anvil to descend from the iron just before the blow of the side-hammers and to ascend just before the blow of the upper hammer, by means of a rod attached at one end to the under side of the upper hammer-beam, and at the other end to a tilting arm which embraces the anvil.

No. 10,171.—Samuel Pratt, of Boston, Mass.—*Improvement in Screw-Nails.*—Patented Oct. 25th, 1853.

The object of this invention is to construct a spike or nail, so that it may be turned into the wood by driving, without having its head bruised (that it may be turned out by a turn-screw) by driving, and without breaking the wood by driving, so as to prevent it from forming a good and compact counter-screw for the threads of the nail to turn in. The elevations at *c c* are to prevent bruising by driving. The inclination of the thread is very oblique. Fig. 3 is a section through *a b*.

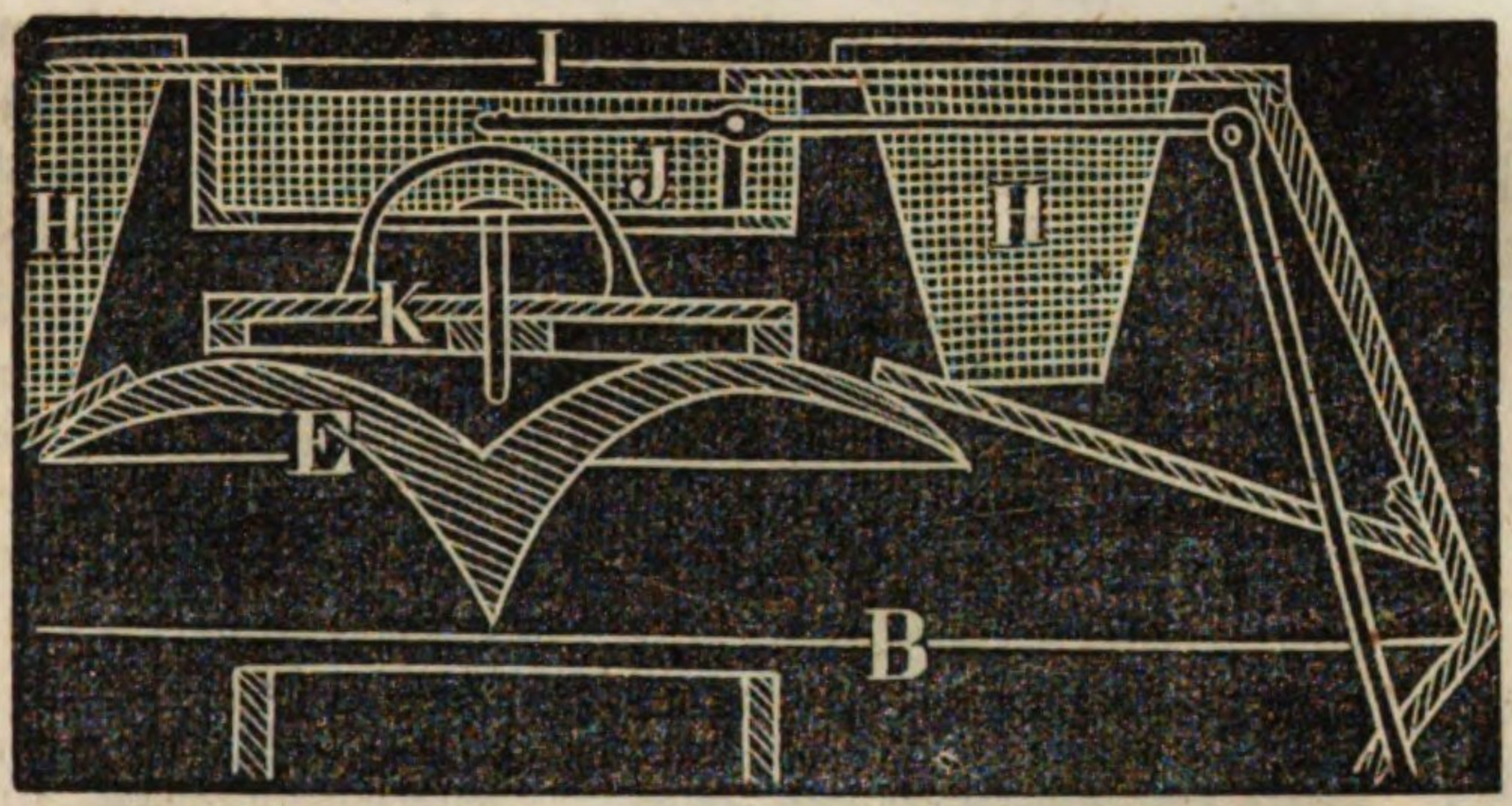


Claim. A screw-nail, constructed with a thread, substantially as herein described. Also, shaping the head so that the battering caused by the driving will not obstruct the application of the turn-screw.

No. 10,172.—Samuel Sweet, of New York, N. Y.—*Improvement in Spark-Arresters for Locomotives.*—Patented Oct. 25th, 1853.

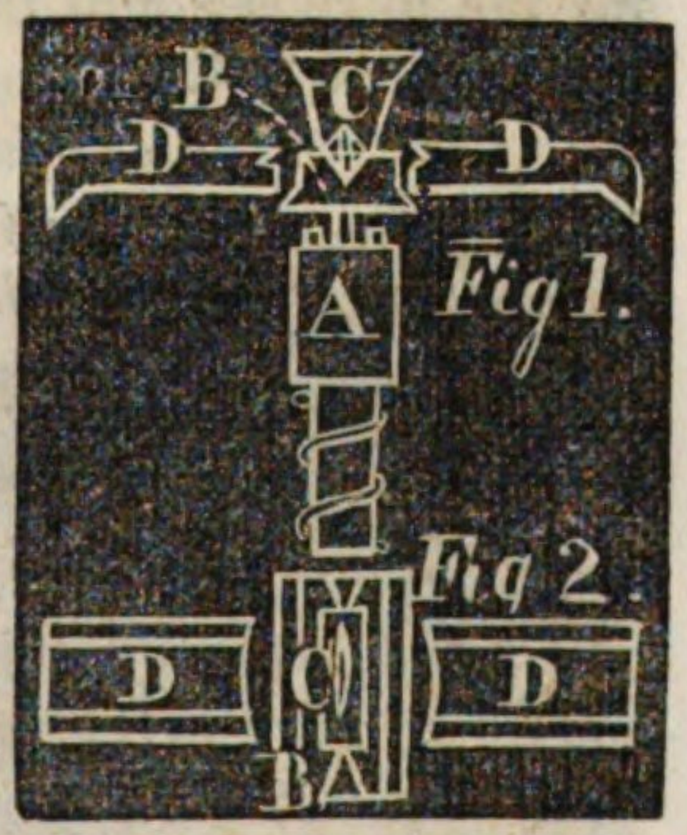
This invention consists in placing a deflector of novel construction within and near the top of the outer case, and directly over the top of the smoke-pipe, so as to deflect the sparks as they rise and give them a direction downwards into the chamber formed between the outer sloping case and the smoke-pipe, and in combination with the deflector; employing a metallic top-plate or cover, which has a series of inverted hollow wire-cloth sieves set in and around it, with their lower tapering end extending down some distance into the hood or outer chamber; the funnel-shaped sieves rendering the escape surface for draft very large, and admitting the deflector to be employed without increasing the size of the hood.

Claim.—The combination of the reticulated inverted frustums of cones H, constructed and situated as described, with the trumpet-



shaped deflector and guard E, the reticulated cylinder J, under the opening I, provided with the reticulated valve K, when these parts are arranged in the upper portion of an enlarged or expanded external pipe, such as that represented at B; the whole operating in the manner and for the purpose set forth in the specification.

No. 10,173.—KASIMIR VOGEL, of Chelsea, Mass.—*Machine for the Manufacture of Weavers' Harness.*—Patented October 25th, 1853.



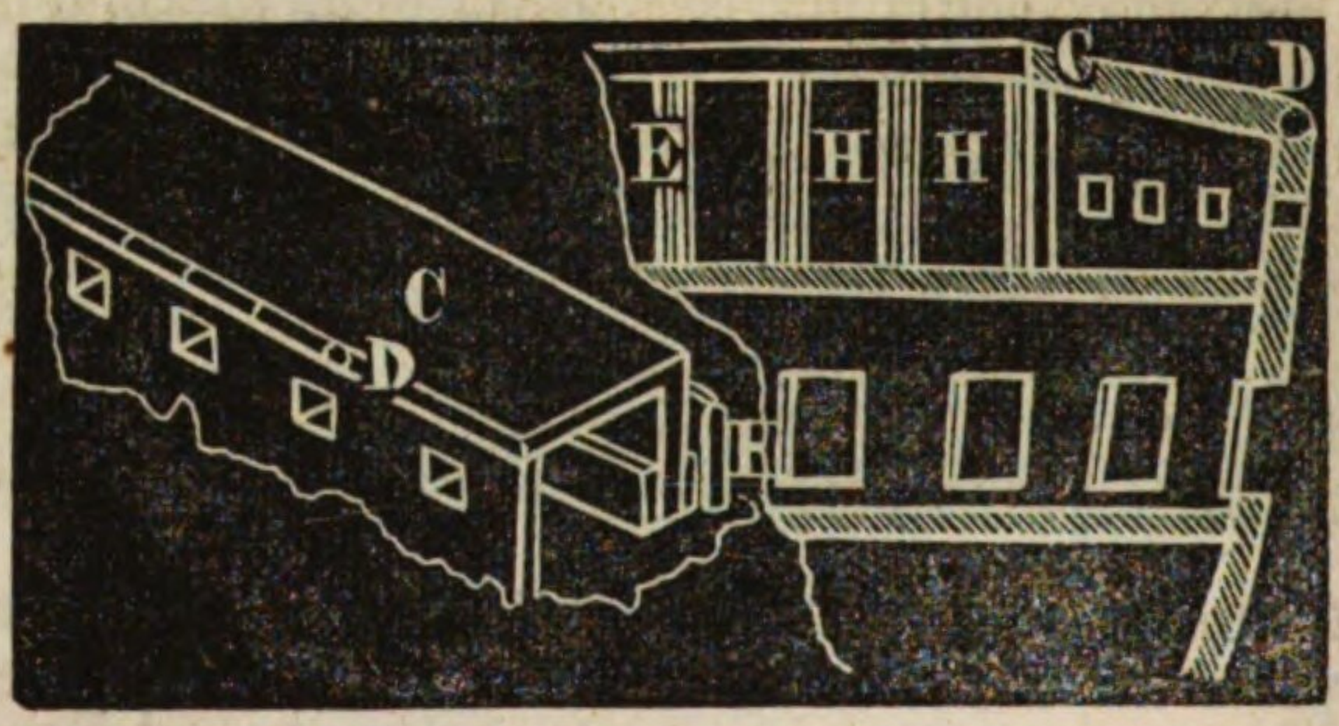
In the figure, A represents a vertical shaft, having on its top a tongue to receive the eye, and around its lower part a spiral spring. The tongue passes through the die B, and into the die C; die B is fitted to the tongue of the shaft A, so as to slide up and down freely upon it; die C is inserted in the end of a piston which moves up and down, and the die C has an orifice to receive the point of the tongue in the top of A. The dies D D are fitted with lips at the ends, which press on plate-springs, and are grooved at the opposite end next the dies B and C. Dies D D are made to slide horizontally. The heddle yarn is placed in the grooves of the metallic eye, which has dropped on the tongue of the shaft A; by the action of the spiral spring the tongue is thrust to the point, and the dies D D and B C, by the action of levers, compress the lids of the eye around each yarn of the heddle, and connect two yarns to each eyelet, without making a knot, braid, or loop in the heddle.

Claim.—The combination of the loom for weaving the borders of the harness, with the press for securing the metallic eye upon the threads of the harness, without a knot, braid, or loop.

No. 10,174.—WILLIAM BALLARD, of New York, N. Y.—*Improvement in Protecting Rifle Batteries (in Vessels of War).*—Patented November 1st, 1853.

The nature of this invention consists in attaching, by means of hinges, a series of shield-boards to the inside of the rail of the bul-

warks, so as to be raised up in time of naval engagements, as a protection to the riflemen; and also in arranging a series of stanchions and rails along the line of the deck, parallel with the bulwarks, and from four to six feet from them, for the support of the inner ends of the



shield-boards when raised up, the space between the stanchions being panelled up by sliding panels, which may be taken down when not required.

Claim.—The use of the shield-boards C in combination with the bulwarks of a ship. Also, the use of the stanchions E, rail G, and panels H, in combination with the deck of the vessel and the shield-boards C, for the purposes and principle of construction and operation, substantially as set forth.

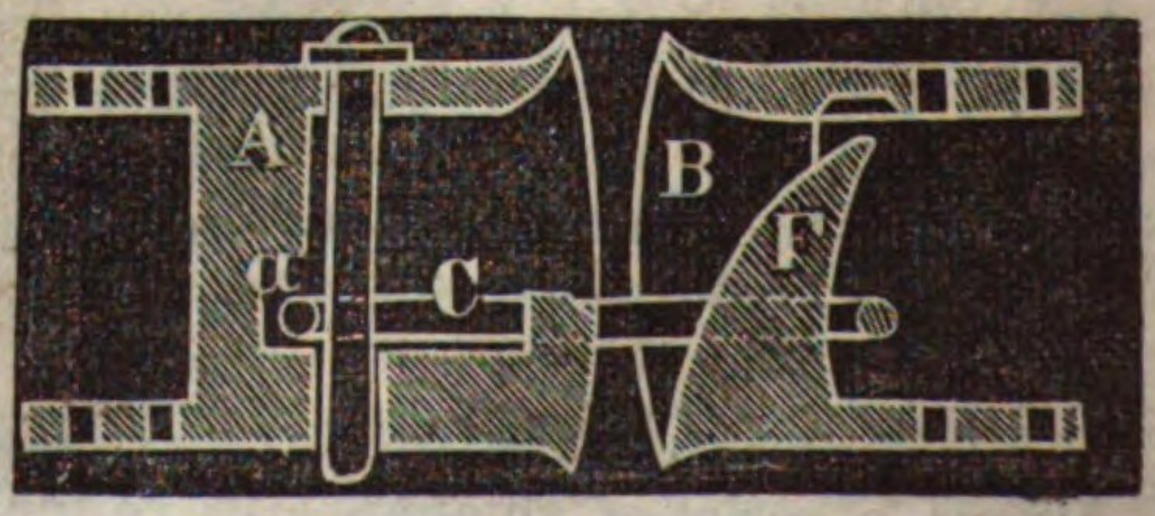
No. 10,175.—CALVIN CARPENTER, Jr., of Pawtucket, Mass.—*Improvement in Magnetic Electric Machines.*—Patented November 1st, 1853.

The object of this invention is to develop a perfectly continuous electric current through the agency of permanent magnets. The invention consists in the arrangement and combination of permanent magnets and disks of helices.

Claim.—The combination of one or more series of permanent magnets, radically arranged, the poles of each series being in one plane, and in two concentric circles, with a disk or disks of helices arranged in three sets, in such manner that the three sets may be acted upon successively at nearly equal intervals of time; one set by the inner circle of poles, and the other two sets of helices being thrown into one constant or uninterrupted current, by means of the current dischargers and springs, or their equivalents, as described.

No. 10,176.—A. P. CHATHAM, of Canoga, N. Y.—*Improvement in Car-Couplings.*—Patented November 1st, 1853.

By reference to the figure, the claim explains this improvement.



Claim.—Constructing the buffer A with a recess *a*, to hold the link C in the proper position for entering the buffer B, and the buffer B with a

cavity and inclined draught-catch F extending to nearly the top of the cavity, so that when a link C is connected to the buffer A, and passed over the catch F of the buffer B, it cannot jump up and become detached from the catch while the cars are in motion, whereby the danger of the cars being separated while running is greatly lessened, while the coupling is simple, cheap, and not liable to get out of order.

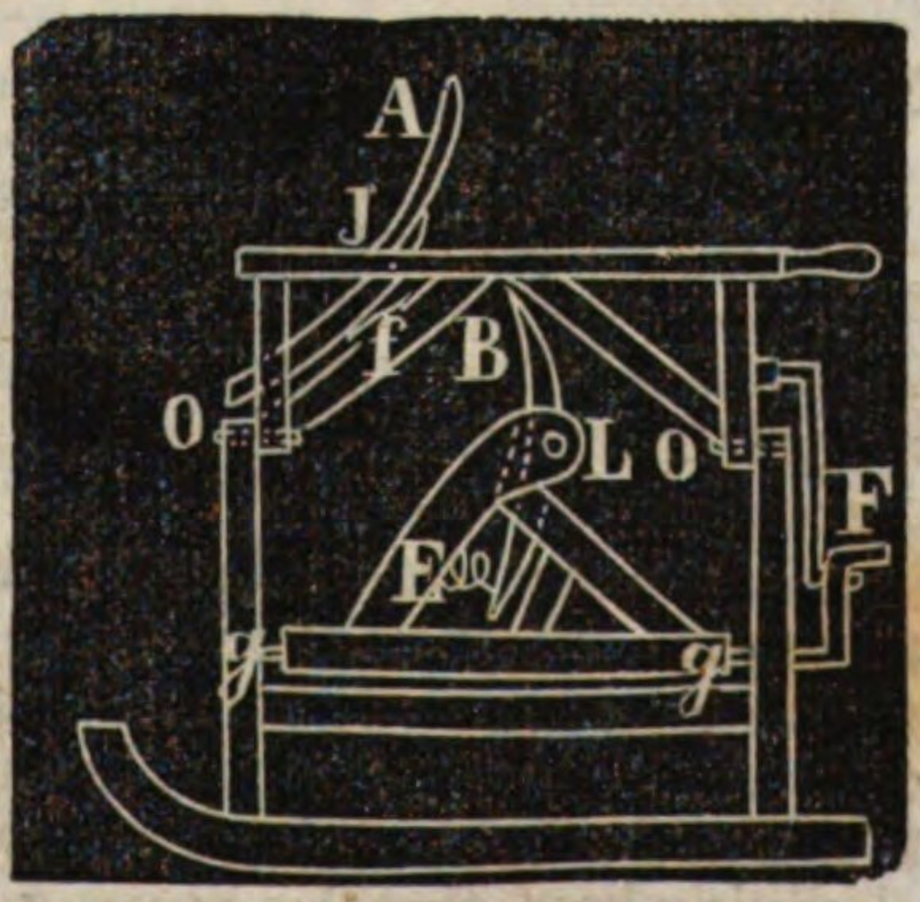
No. 10,177.—GILBERT S. CLARK, of New York, N. Y.—*Improved Pen and Pencil-case.*—Patented November 1st, 1853.

In the figure, A represents the body of the case, around which there is a band B; C, tube fitting in A, and attached by pivots to band B, by means of which it can be shoved in or out; E, pen, inserted in the lower end of tube D; D can be shoved in or out; tubes C D form the pen-slide; F, stationary tube, secured to A; G, pencil-slide, which has a disk C at its upper end, to which disk tube H is soldered; I, pencil, with a pivot *d* working in a slot.

Claim.—The peculiar arrangement of the pen and pencil-slides: viz., the pencil-slide G with its covering tube F; within the pen-slide, or tubes C and D, and operating the two slides, independently of each other, in the manner as set forth.

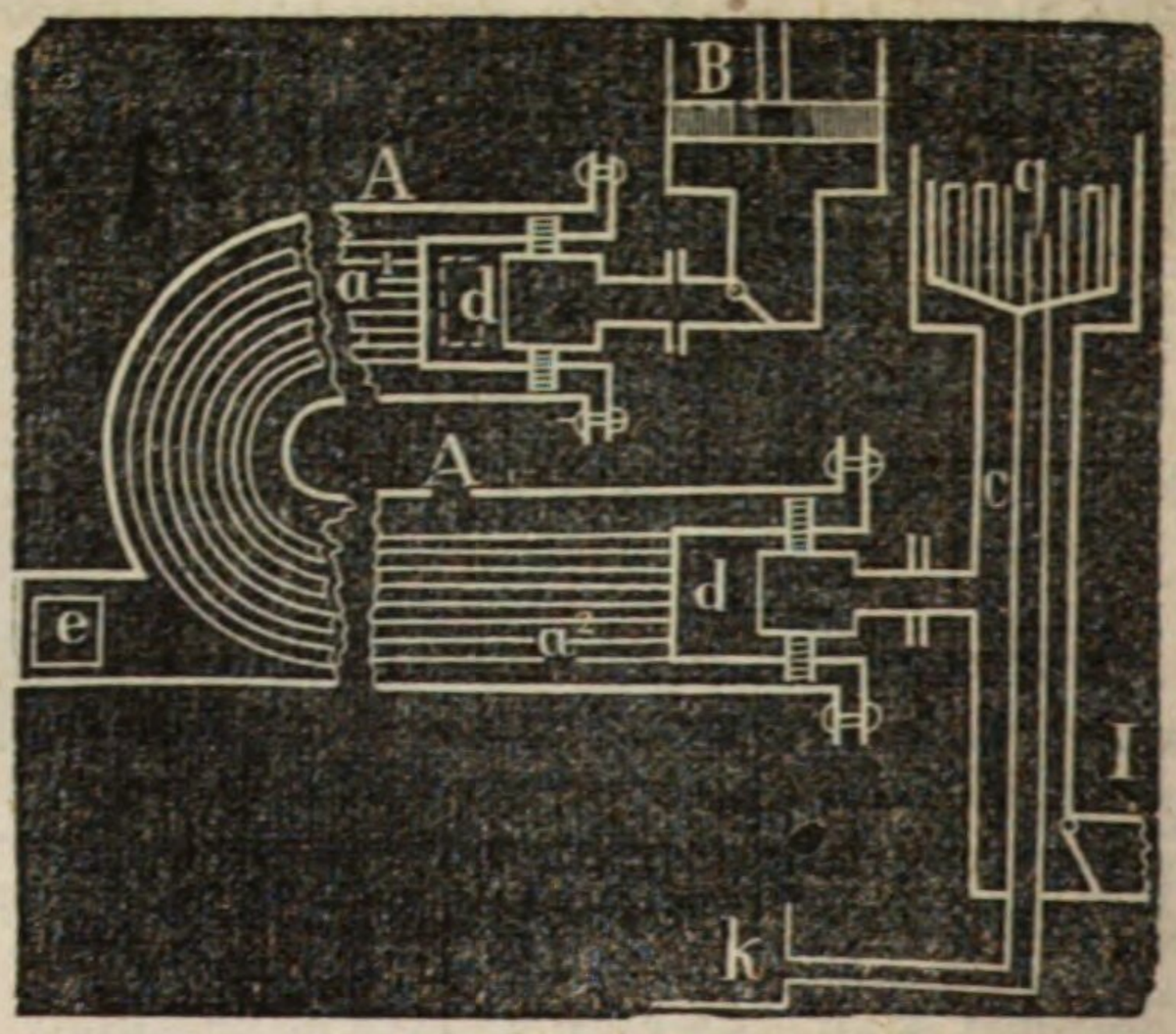
No. 10,178.—J. W. CORMACK, of Quincy, Ill.—*Improvement in Corn and Sugar-cane Cutters.*—Patented November 1st, 1853.

The knife B is on a level with the body of the sled, and projecting some two or three feet over its side. The arm A, by means of the framing, is placed some three feet over the knife, and slightly in advance of it; so that when the sled is drawn forward, the arm comes first in contact with the corn, and bends it forward, and then the knife comes in contact with it, and in addition to its being drawn forward, it has a slight side motion by means of a spring, which facilitates the cutting operation. The arm throws the corn forward, and lays it all in one direction. The knife and arm may be revolved from one side of the sled to the other.



Claim.—The framing and manner of attaching the knife and arm to the sled.

No. 10,179.—Benjamin Crawford, of Pittsburgh, Pa.—*Improvement in Condensers for Steam-Engines.*—Patented November 1st, 1853.



In the figure, B represents the air-pump, with which the upper series of tubes communicate; the lower limbs of the same communicate with the escape pipe, leading from the exhaust valve of the engine. The openings *d*, in the front ends of the two limbs of the water-jacket A, and a similar opening *e*, in the opposite end of A, form inlet and outlet passages for the water through the condenser, and are connected with the water outside, so that a constant current of water will be forced through the jacket and among the tubes, for the purpose of condensing the steam or vapor entering the tubes from the engine. The escape pipe c, which conveys the steam to the condenser, connects with an intervening chamber that contains an evaporator *g* within it.

The steam in entering from the engine passes through the tubes in the evaporator, and round the sides thereof, communicating heat to the water, in order to distil it from the salt or other extraneous matter.

Claim.—The arrangement of the tubes or passages in the condenser with the inlet and outlet openings in the case, so that a current of cold water is caused to flow round the ends of the tubes; whereby the condenser is prevented from undue heating, and the tubes kept coolest at both ends, and warmed at the middle, whereby the great bulk of the heat is transferred to the condensing water, near the point at which it is discharged from the case.

No. 10,180.—Chancey O. Crosby, of New Haven, Conn.—*Machine for Sticking Pins.*—Patented November 1st, 1853.

Claim.—The method of crimping the paper by means of movable folding blades, in combination with the bed-plate, while the back and front sides of the paper are sustained by the clamping-bars. Also, the method of crimping the paper by means of moving folding-blades, descending and ascending between the stationary and moving clamping-bars, when these clamping-bars serve as a part of the crimping apparatus, whether the paper be sustained by the bed-plate or otherwise. Also, the method of lifting the pins from the distributor, and carrying them away, and sticking them into the crimped paper, while the distributor is bringing another supply of pins in front of the clamping-bars, thereby keeping the lifting-pliers, or other lifting apparatus, continually in operation. Also, the lifting apparatus, or any substantial part thereof, when constructed, combined, and made to operate substatially as described in the specification. Also, the combina-

tion of the lifting apparatus with the inclined transverse notches in the stationary clamping-bar, by which means the pin will always be stuck in an exact line, even though the pins are not straight. Also, the combination of the conical rollers with the side-planes, to form a straight inclined conducting channel. Also, the lifting-pliers, either with or without the creeper, sliding-guide, or director N.

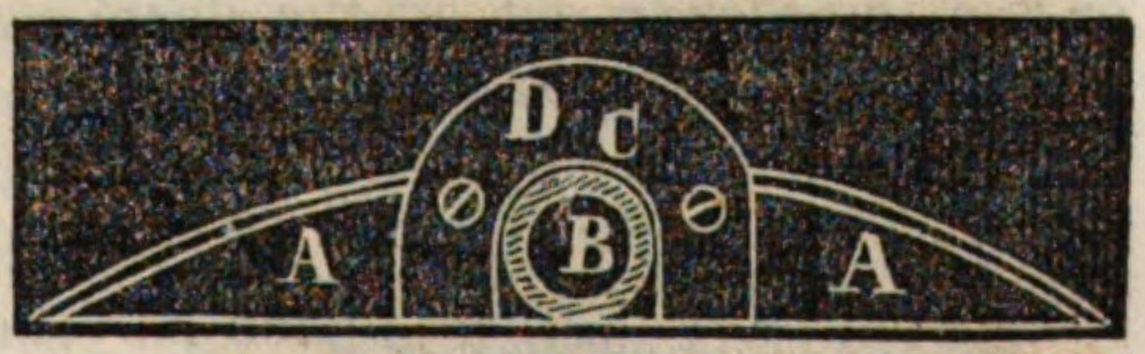
No. 10,181.—CHANCEY O. CROSBY, of New Haven, Conn.—*Improvement in Machinery for Sticking Pins.*—Patented November 1st, 1853.

Claim.—The combination of the punches I (working in horizontal grooves *c*) with the slide *g* and the straight inclined channels D D. Also, the combination of the punches with the double folding-blades, when these are combined with the movable and stationary clamping-bars, and the whole is constructed and combined substantially as described. Also, the method of crimping the paper by means of folding-blades working between stationary and moving clamping-bars, when those clamping-bars serve as a part of the crimping apparatus. Also, the bars forming the side-guides to the spaces, to guide the pins while falling down from the separator to the horizontal grooves, in combination with the grooves and punches.

No. 10,182.—CHANCEY O. CROSBY, of New Haven, Conn.—*Machine for Sticking Pins.*—Patented November 1st, 1853.

Claim.—This claim embraces the various parts of the machinery as constructed, arranged, and operating, for the purpose of crimping the paper, and sticking the pins therein.

No. 10,183.—DAVID DEMAREST, of New York, N. Y.—*Improved Mode of Protecting Engine Hose.*—Patented November 1st, 1853.



This invention consists in the employment of a portable section of a rail-track, which has an arch or opening cut in its bottom, into which the hose fits. (See figure.) C is the opening; B, the hose; D, brace for strengthening A where the opening C is cut through.

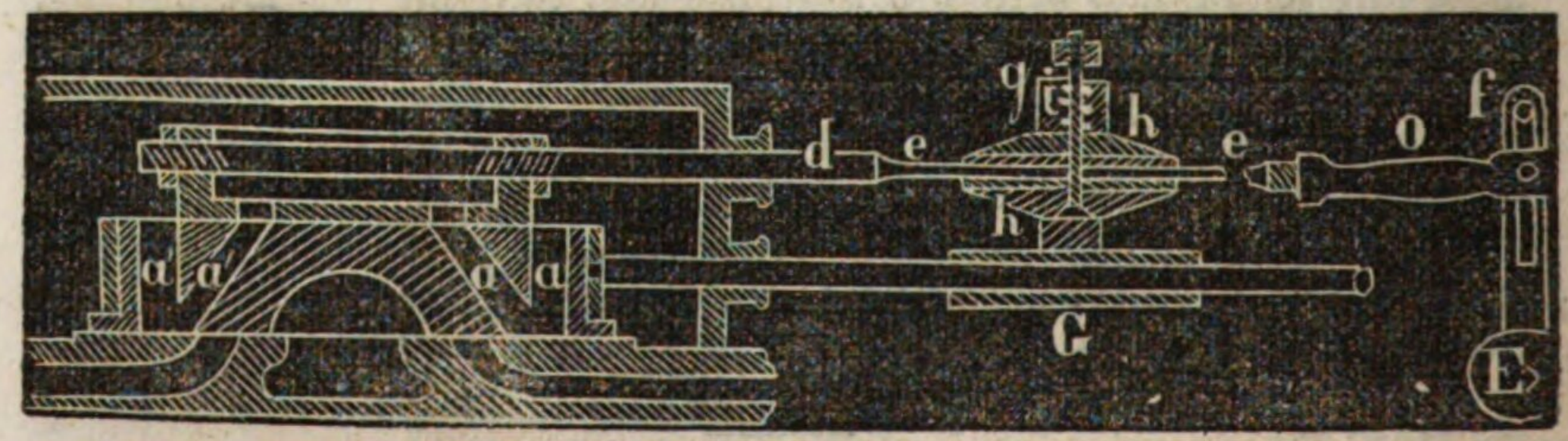
Claim.—The employment of a portable section of a rail-track, with an opening C in its centre for the hose B to fit in when the section is placed over the hose; for the purpose of covering the hose at certain points, and saving them from the great injury they sustain from carriages and cars passing over them during the time of fires.

No. 10,184.—Joseph Farnsworth, of Madison, Ind.—*Improvement in Car-wheels.*—Patented November 1st, 1853.

Claim.—A cast-iron car-wheel constructed as herein described (viz., having the hub and flanged rim connected by a curved annular disk extending from the outer edge of the hub to the outer edge of the rim).

No. 10,185.—L. R. Faught, of Macon, Ga.—*Improved Regulators for Steam-Engines.*—Patented November 1st, 1853.

In the figure, *d* represents a rod flattened at *e e*, to be received in the friction-box, which consists of a boss G secured to the valve-rod, and has two horns *g g*, forming guides for two metal friction-plates *h h*,



between which the flattened part *e e* is received; the upper plate *h* is pressed down by means of spring *i*. Rod *d* is connected by a link *o*, with a short arm *l* on a rock-shaft *f*, from which pendulum E is suspended.

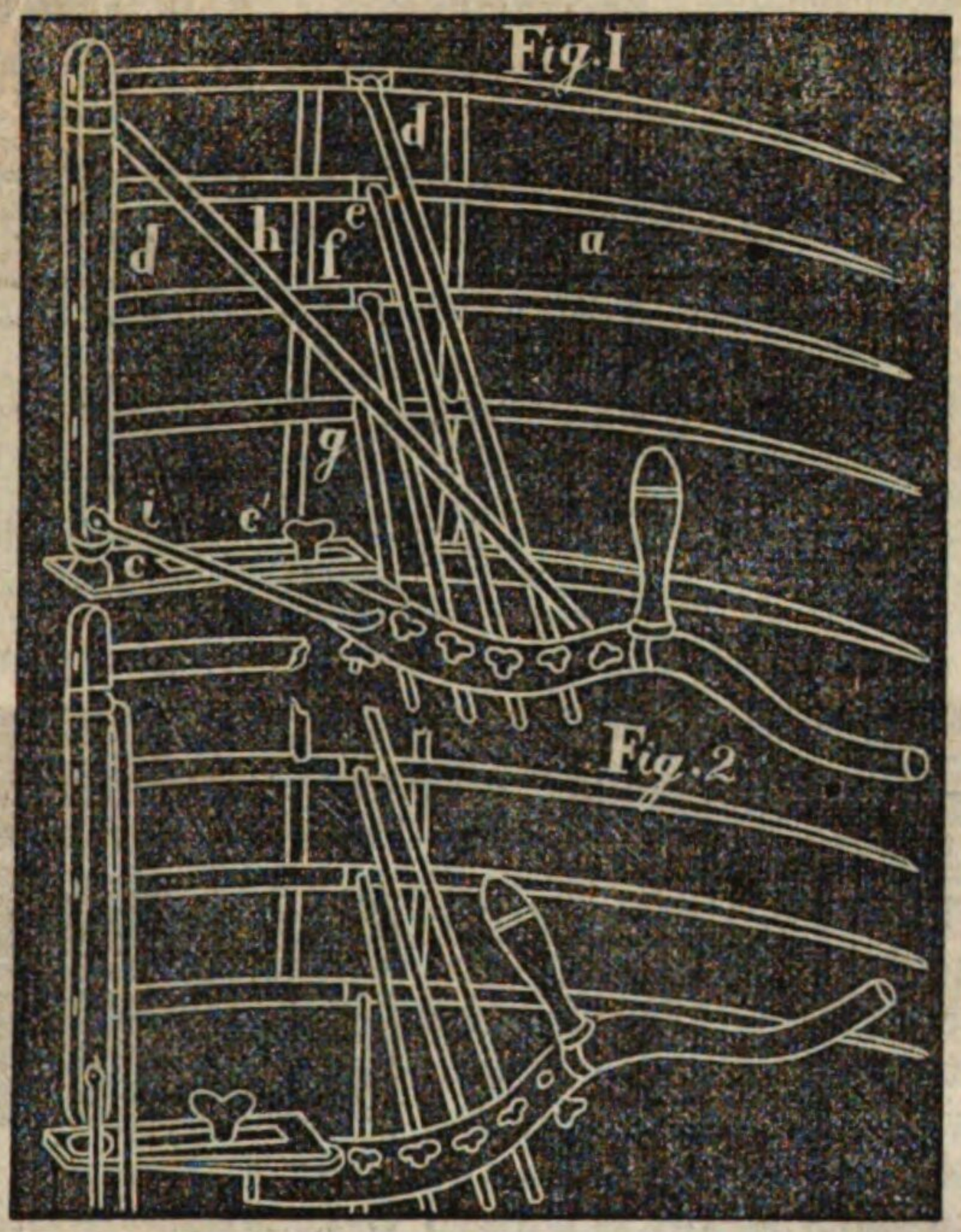
Claim.—Connecting the cut-off with the slide-valve, so that the latter drives the former by friction, when the cut-off is at the same time connected with a pendulum, air-spring, or some other device, offering such a resistance to its movement as will prevent its moving the same distance as the valve, and arrest it at such a point in the motion of the valve as to cut off the steam at the desired point in the stroke, and will increase or diminish with any increase or diminution of the speed of the engine, and thereby retard the motion of the cut-off more or less, in order to cut off the steam earlier or later in the stroke, and thus to regulate the speed.

No. 10,186.—C. P. Kelsey, of Livingstonville, N. Y.—*Improvement in Grain-Cradles.*—Patented November 1st, 1853.

The object of this improvement is to enable the workman to lay the grain more regularly, to cut the entire length of the scythe, and to readily adjust the fingers; also, so that the cradle shall balance better on the handles, and be capable of being folded up when not in use.

a, fingers; *b*, post; *c*, a bar of iron which forms the connection between the post and lower end of the snath; a thumb-screw passes through this bar at *c'* to fasten it to the snath. The fingers are attached

by braces, which have joints or links as at *d*, *e*, *f*, *g*, for the purpose of making their position adjustable.



Claim.—The bar *c*, or its equivalent, for attaching the frame of fingers to the snath. Also, so connecting the braces *d*, *e*, *f*, *g*, with the fingers, by means of links or other universal joints, that the snath may be folded close against the fingers, without requiring that the braces shall be loosened in the snath.

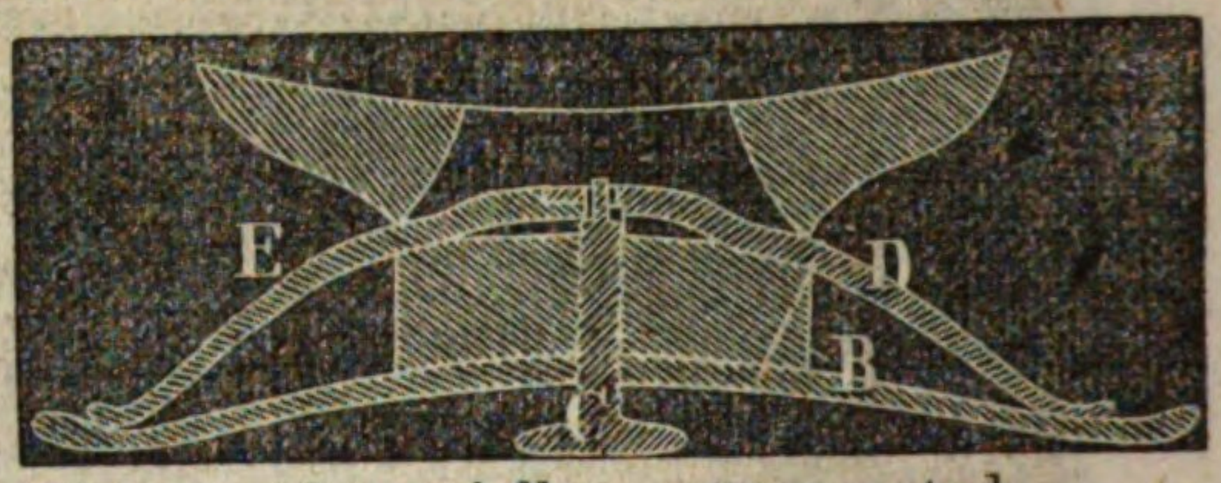
No. 10,187.—Edmond Morewood and George Rogers, of London, England.—*Improved Apparatus for Coating Sheets of Metal.*—Patented November 1st, 1853.

The three rollers D E F revolve in the direction of the arrows, and D and F are adjustable in their distance from E, so as to admit sheets of various thicknesses between them. D′ is the sheet fed in, submerged under the surface *s* of the bath, the operator supporting its lower edge by means of a hooked-bar H. After the sheet has passed through the rollers D and E, it is thrown against the bar *b*, in the position shown in the figure in dotted lines; and the operator feeds it between the rollers E F, which draw it out of the bath, press the coat of metal on it, and flatten out all irregularities on the sheet.

Claim.—The method described of coating sheets of metal, by im-

mersing them in other molten metals which are more fusible, by means of rollers, as described; so that with the same machine, sheets of metal varying in thickness may be coated, free from puckers, bends, or indentations on their surfaces.

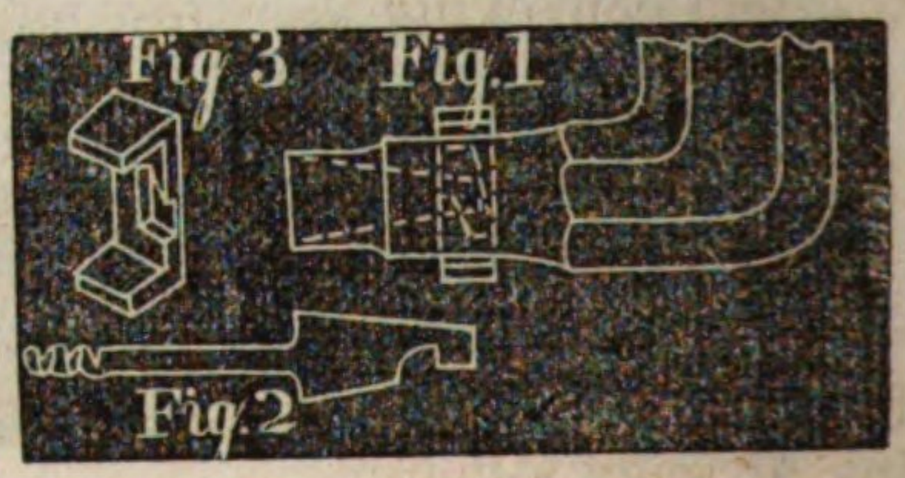
No. 10,188.—Russell S. Morse, of East Dixfield, Me.—*Improvement in Carriage-Springs.*—Patented November 1st, 1853.



By raising or lowering the screw C, the pressure of springs D E on the bed-spring B, will be increased or diminished.

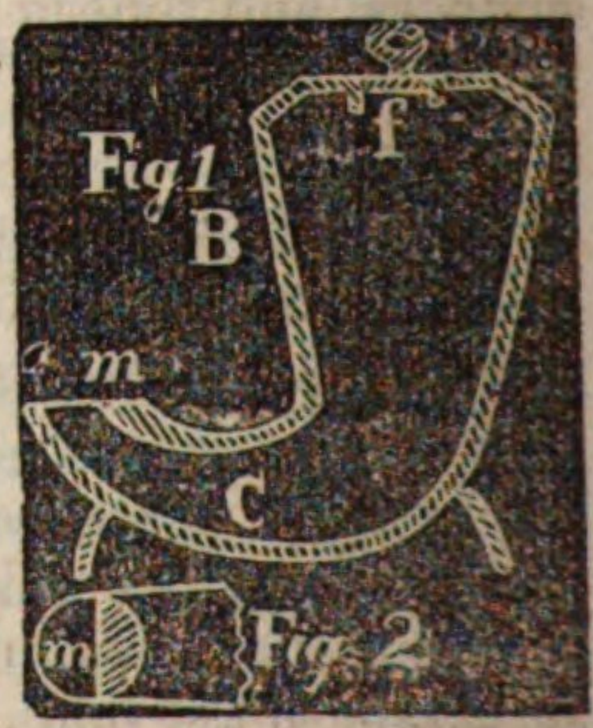
Claim.—The adjustable auxiliary springs D E, in combination with the bed-spring B, substantially as represented.

No. 10,189.—Howard Perkins, of North Bridgewater, Mass.—*Improvement in Bits and Bit-stocks.*—Patented November 1st, 1853.



Claim.—The manner of constructing and fastening the bit into the socket by the slide-lock, having the end of the bit so formed as to fit into the groove in the key, and having the end of the bit press down upon the key, so that, when the key is slipped back, the bit may be easily removed.

No. 10,190.—Henry M. Ritterband, of New York, N. Y.—*Improved Gold-washer and Separator.*—Patented November 1st, 1853.



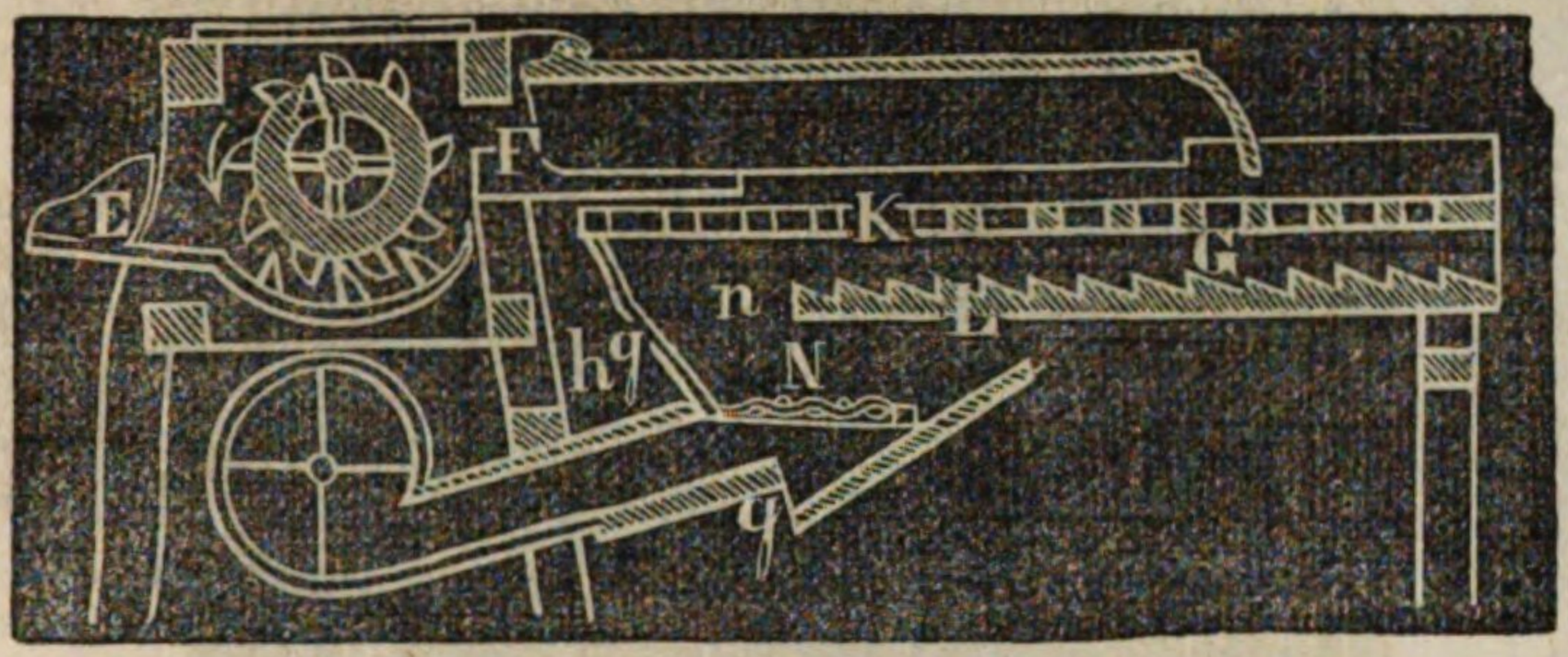
The object of this invention is, by the agency of water, to obtain a force, which, being just sufficient to overcome the gravity of the earthy matters mixed with the gold, is ineffectual to overcome the superior gravity of the gold.

Claim.—The combination of the tube B, valve *f*, and lip *m*, constructed and having the relative proportions substantially as described in the specification, forming an apparatus for removing earth and stones from auriferous earth.

No. 10,191.—John A. Taplin, of Fishkill, N. Y.—*Improvement in Machines for Threshing and Cleaning Grain.*—Patented November 1st, 1853.

The axis of the threshing cylinder A (see figure) is connected with crank-shaft *h*, by means of belting; and the revolutions of A will give to the grain-separator G a reciprocating motion, by means of connecting-rods G. The grain is fed in upon apron E, passes along spout F,

and comes on the reciprocating-screen K, falling through upon the fluted bottom L, while the straw is delivered at the end of the machine. The grain is finally moved towards *n*, where it is delivered upon the riddle N, and meets the blast of the fan; *q* is the place of delivery.



Claim.—The vibrating straw-carrier and grain-separator, with a screen K and fluted bottom-board L, for the purpose of separating the grain from the straw, returning the former to the winnowing apparatus, and conveying the straw to the hinder extremity of the machine.

No. 10,192.—William H. Towers, of Philadelphia, Pa.—*Improvement in Metallic Pens.*—Patented November 1st, 1853.

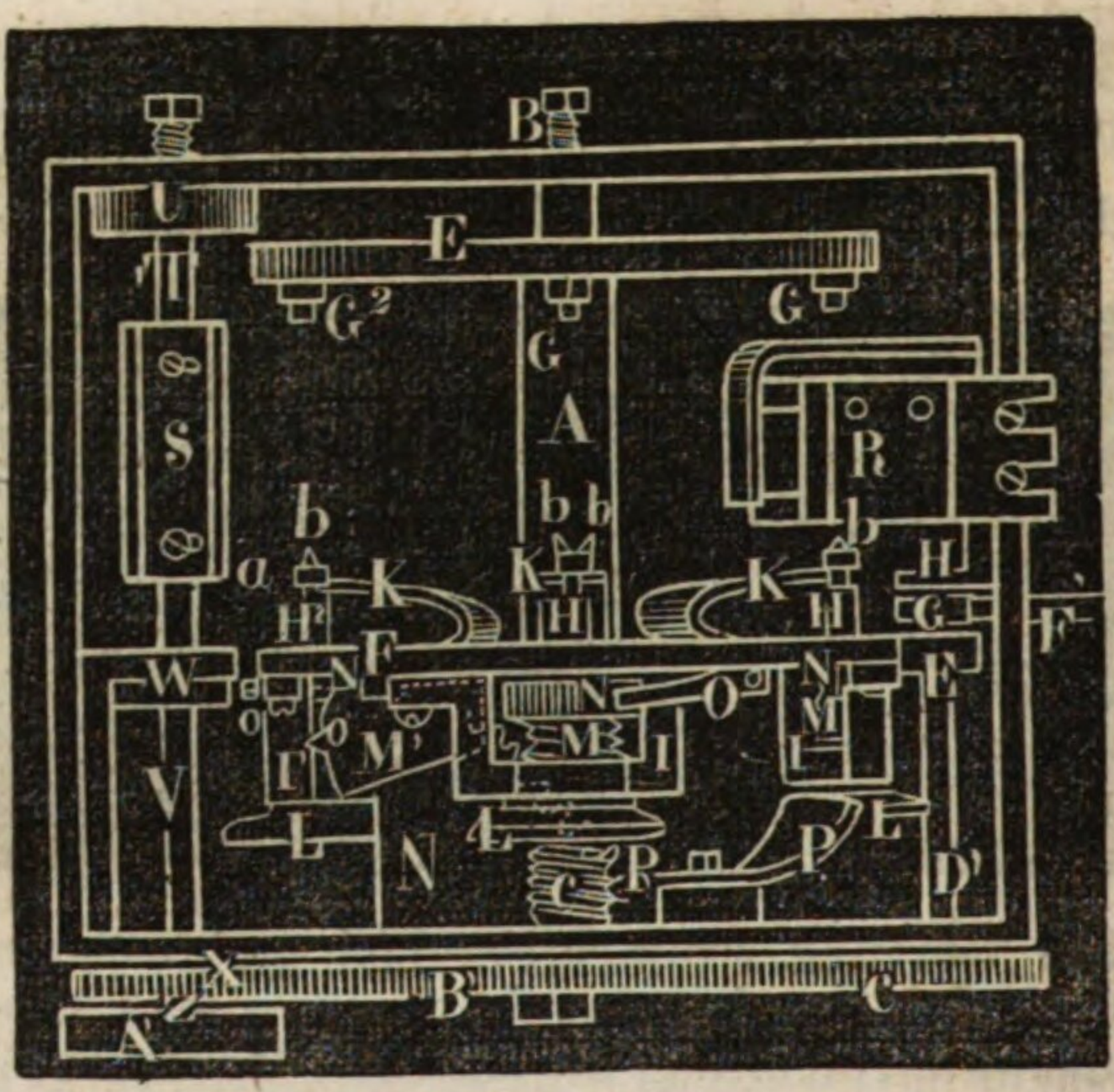
The nature of this improvement consists in making metallic pens flat, with cavities or depressions in both surfaces, for retaining the ink, in such a manner as to enable the pens to be more easily formed, and of a less bulk of metal, and more convenient for use, as they can be used for writing on either side.

Claim.—Making metallic pens with depressions or cavities for retaining the requisite quantity of ink, and making them flat on both surfaces, and tapering the shank or main body of the same, and inserting it in a corresponding socket, in the centre of the lower end of the pen-holder.

No. 10,193.—Increase S. Waite, of Hubbardston, Mass.—*Improved Machine for Turning Cylinders*, &c.—Patented November 1st, 1853.

To fully describe the construction and operation of this machine would require too much space for this Report.

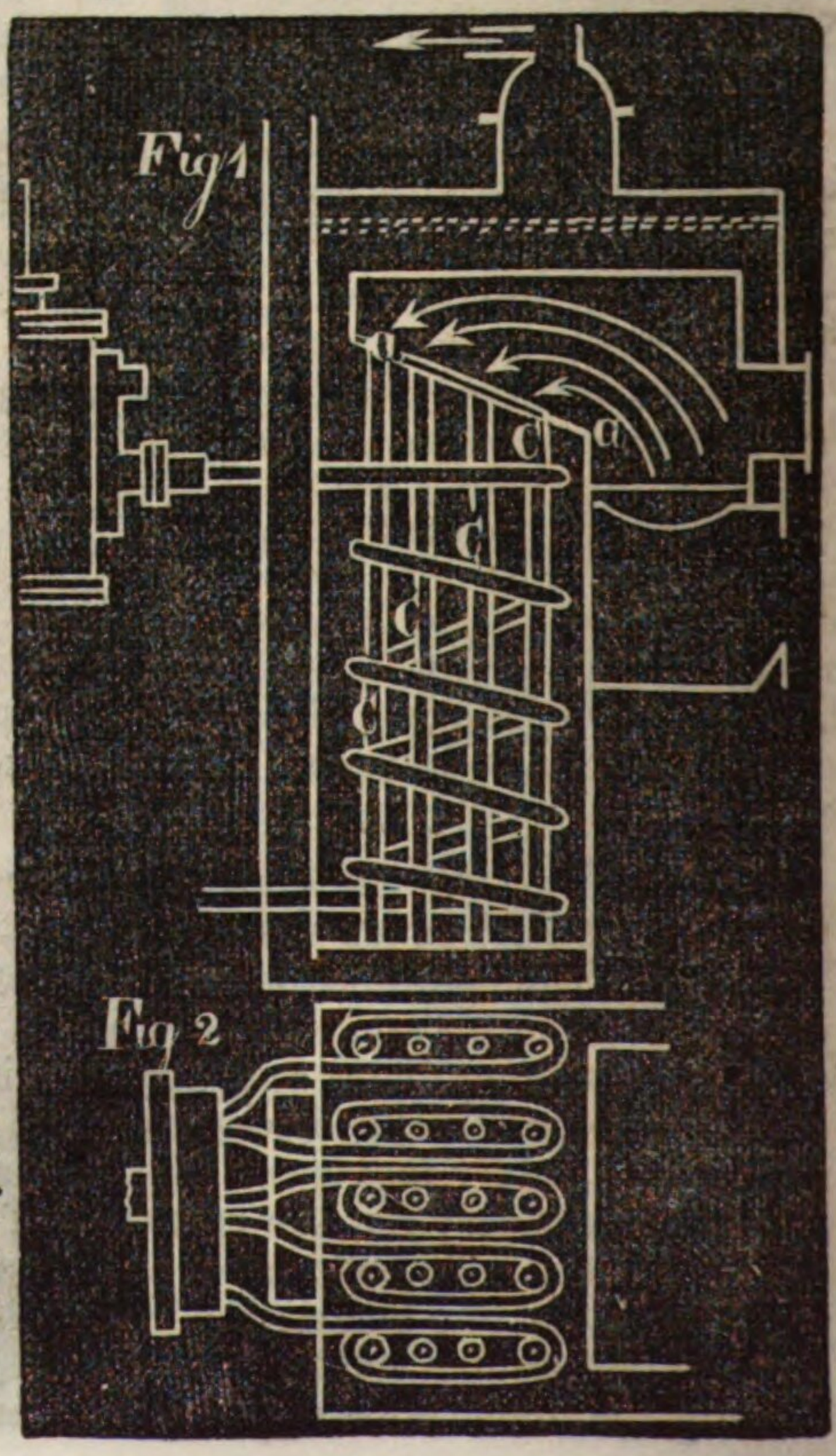
Claim.—The combination composed of the feeding hopper, the series of rotary mandrels and centres applied to the shaft A, the revolving cutter or cutter-cylinder s, the mechanism for giving each mandrel an endwise movement backwards and forwards; mechanism for arresting the rotary movement of the shaft A, or the heads E F, during the time necessary for the operation of the cutter or cutter-wheel s, on each piece of wood; and finally, a mechanism for rotating the shaft A and its two heads; the mechanism for moving each mandrel endwise being the spring K, the wheel L, and cam-plate P; that for rotating the mandrel being the gear N and the gear W, on the shaft Y,



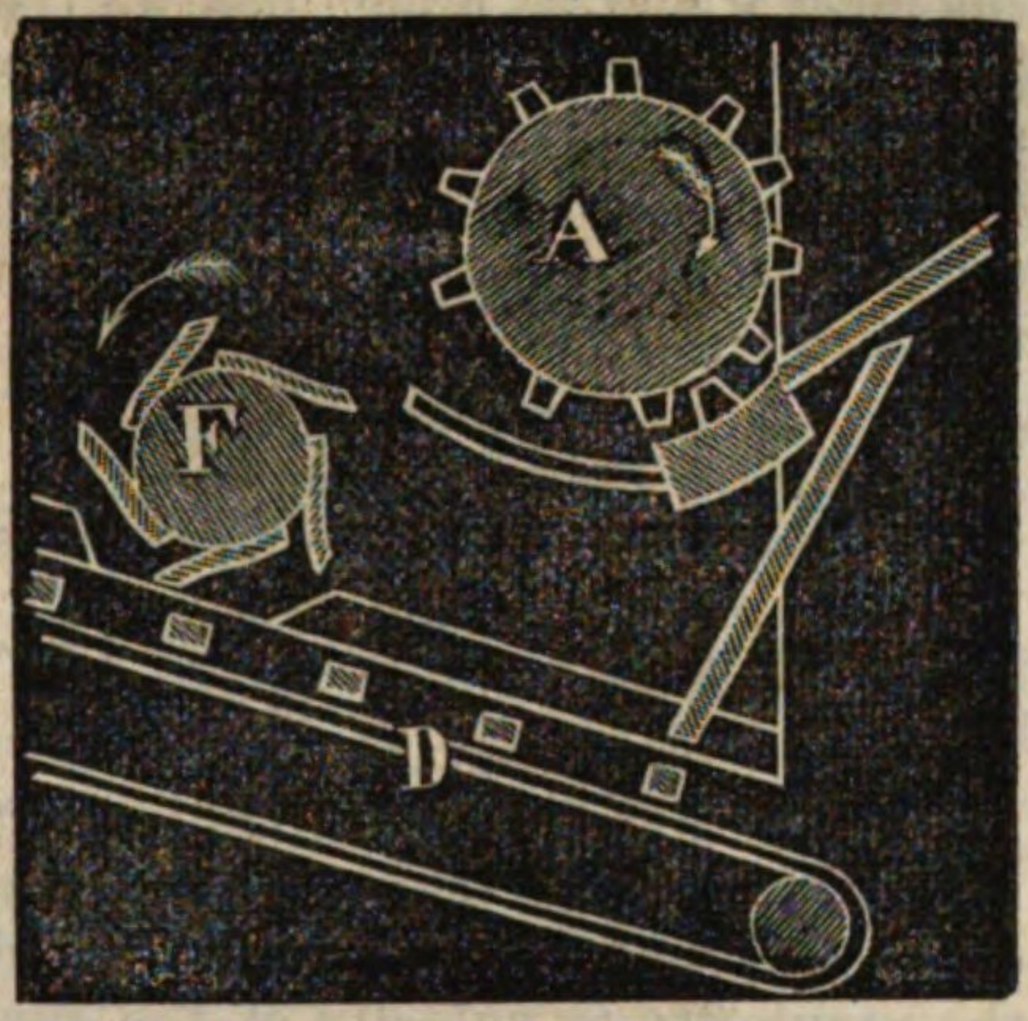
put in revolution as described; that for arresting the rotation of the shaft A being the stud I′ K′ or L′, stop-plate M′, and the screw applied to each mandrel; and finally, that for rotating the shaft A, being the friction-roller F, made to operate against the periphery of the circular head F, and to be rotated and borne against said head.

No. 10,194.—Peter H. Watson, of Washington, D. C.—*Improvement in Steam-Boilers and Engines.*—Patented November 1st, 1853.

Claim.—The method of recovering the heat of the exhaust-steam, by passing it through the comparatively cool water in the lower portion of the boiler. Also, the arrangement of the upper end of the drop-flues c in an inclined plate *a*, to facilitate the entrance of the smoke into the flues, and the passage of the steam from beneath the inclined plate into the upper part of the boiler.



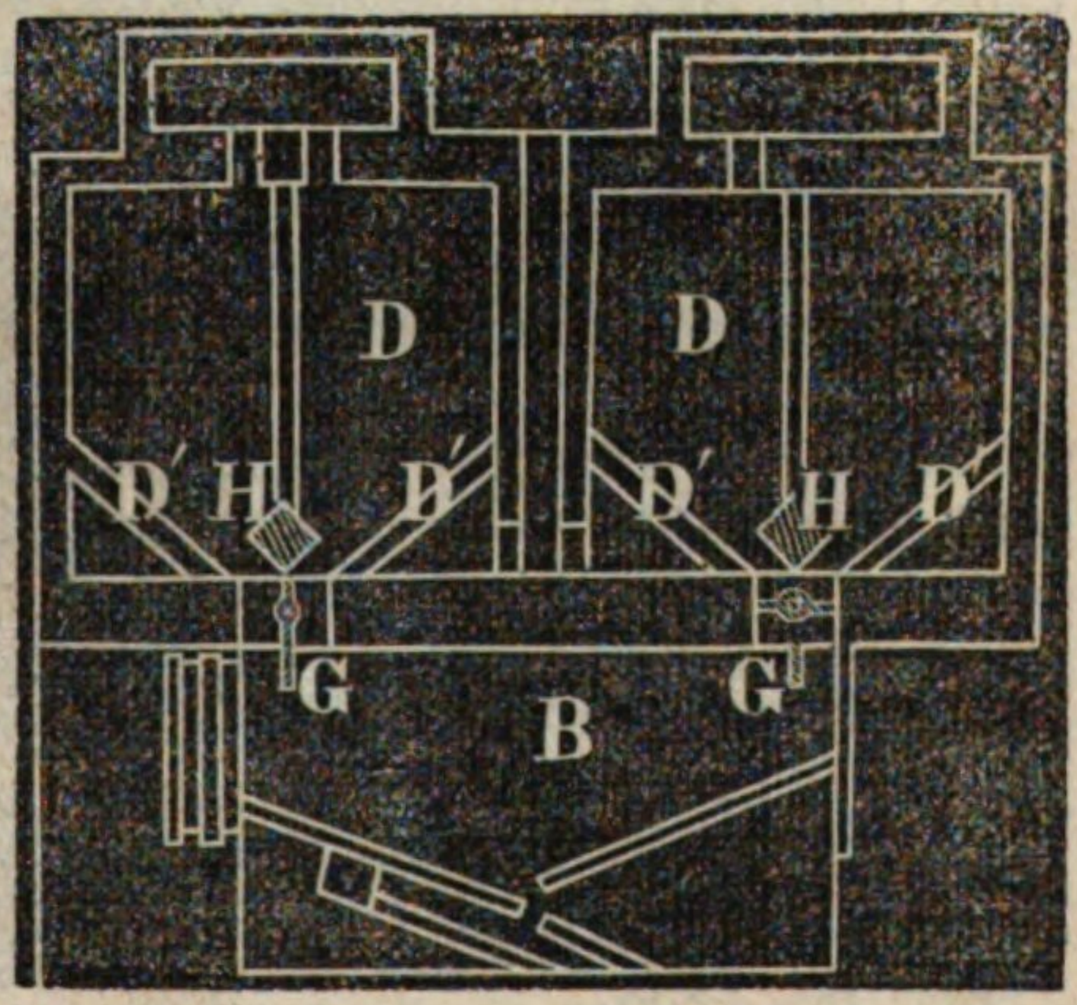
No. 10,195.—Jacob V. A. Wemple, of Chicago, Ill.—*Machine for Separating and Cleaning Grain.*—Patented November 1st, 1853.



This invention consists in the employment of a separating and break cylinder F, so situated and operating, as regards the threshing-cylinder A, as to break the force with which the straw and grain is thrown on the endless apron D; also serving as a partial separator.

Claim.—The employment of a cylinder F, having tangential or other suitably projecting plates across or along its periphery, for the purpose of separating the grain, and breaking the impinging effect produced by the threshing-cylinder on the endless apron D; the cylinder F being so situated, and operating in rear of the threshing-cylinder, as gently to feed over it the straw and headings, as they are delivered from the threshing-cylinder.

No. 10,196.—George Calvert, of Upperville, Va.—*Improvement in Bee-Hives.*—Patented November 1st, 1853.

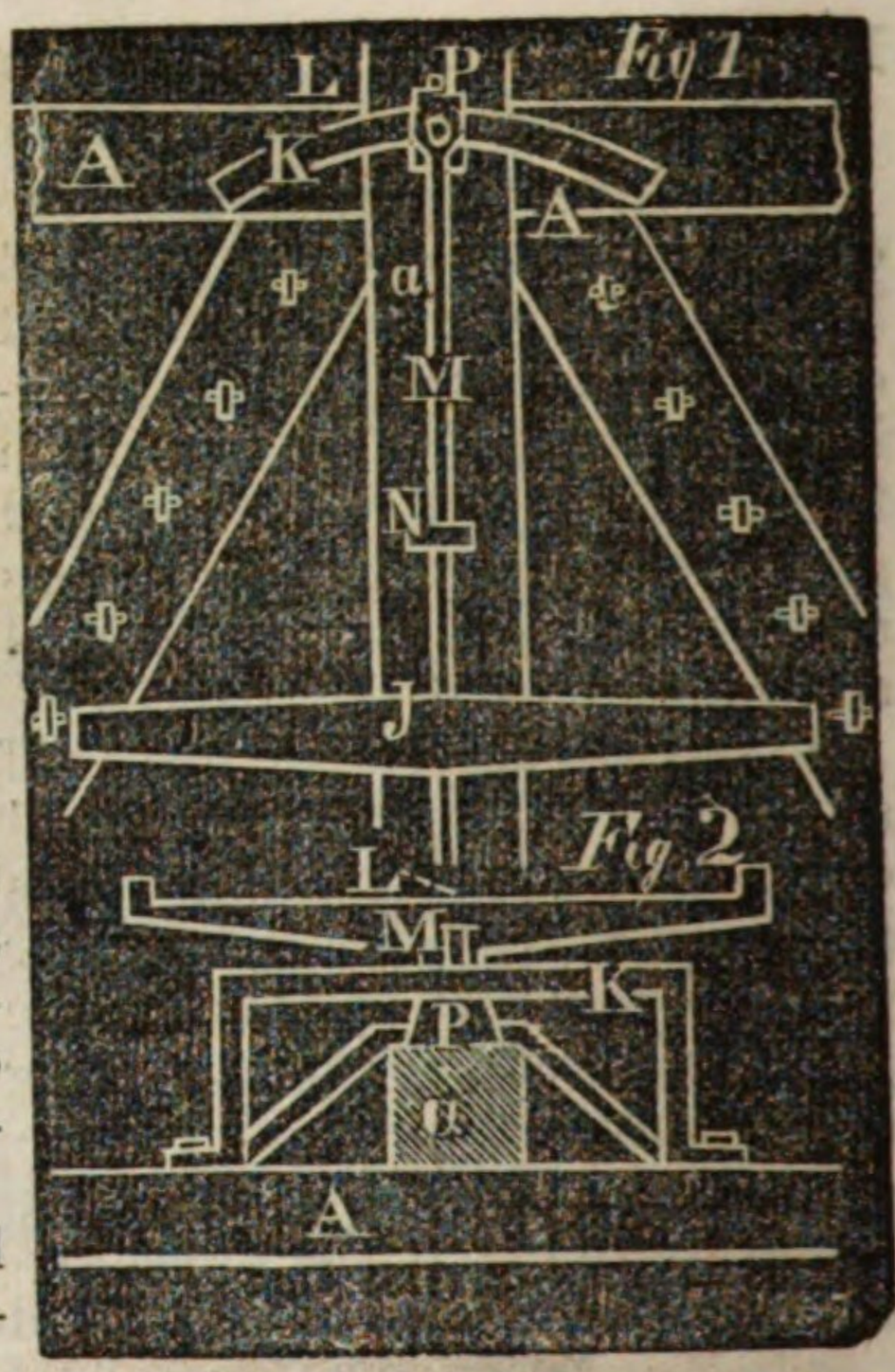


The object of this improvement is to effect a perfect cleaning of the hives of litter, by means of inclined planes D′, in the store-hives D, connected with the double flue G, at the top of the brood-hives B; the litter to pass down the sides, rather than through the centre of the brood-hives B, so as not to disturb the brood colony at work. The cross-piece H, brought down to the mouth of the planes D′, becomes a base for the support of the combs.

Claim.—The combination of the honey-boxes D D with the box B and cross-pieces H H, arranged and operated in the manner and for the purposes set forth.

No. 10,197.—Seneca Lapham, of Salem, Ohio.—*Improvement in Cultivators.*—Patented November 1st, 1853.

A represents the frame of the machine, and tongue *a* is secured to it by means of king-bolt J, round which it can turn; pin L, projecting from brace K, forms the fulcrum for lever M; staple N is secured to tongue *a*, and through this staple passes lever M. By this means lateral movement can readily be given to the tongue.



Claim.—The combination and arrangement of the parts, consisting of the lever M and its attachment to the brace K, and the connection of the tongue *a* to the lever by the staple N; and this in its application to the purpose of changing the direction of this and other machines.

No. 10,198.—William B. Leonard, of New York, N. Y.—*Recording Fluid Metres.*—Patented November 1st, 1853.

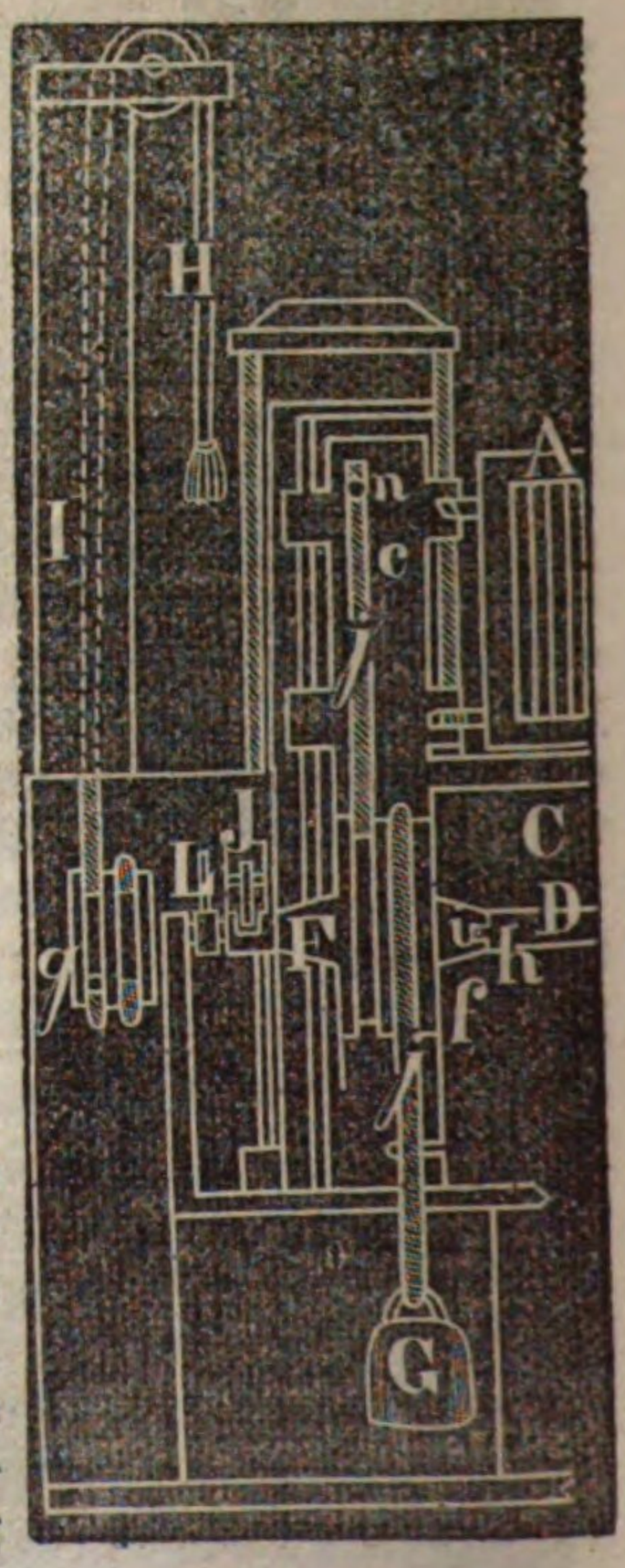
The object of this improvement is measuring the quantity of fluid that may pass through a pipe, or is discharged therefrom, without regard to the regularity or velocity of the current.

Claim.—The combination, in fluid metres, of mechanism for measuring the volume of a flowing fluid, however variable; mechanism for measuring the velocity of the flowing fluid, however that may vary; mechanism for multiplying the two quantities together; and mechanism for recording the product, in such manner as to show on a register the quantity of fluid that has passed. Also, the combination of a self-acting guard-valve or valves, however constructed or arranged, with the water-wheel or other motor, in a meter, in such manner that the flow of water through the meter will be arrested whenever its pressure is not sufficient to give motion to the motor the instant it begins to flow, whereby the escape of water through the meter unmeasured is prevented.

No. 10,199.—William T. Merritt, of Hart's Village, N. Y.—*Improved Mode of Opening and Closing Gates.*—Patented November 1st, 1853.

By reference to the annexed figure, the claim explains this improvement.

Claim.—The method of elevating and depressing, or opening and closing the gate, as shown and described; viz., by means of the shaft D, having upon it the pulleys *f f*, *g g*, the pulleys *g g* being attached permanently to the shaft, and having ropes H H′ attached to them, and the pulleys *f f* being placed loosely on the shaft, and connected to it at a certain period by means of pins *h h*, on the shaft working

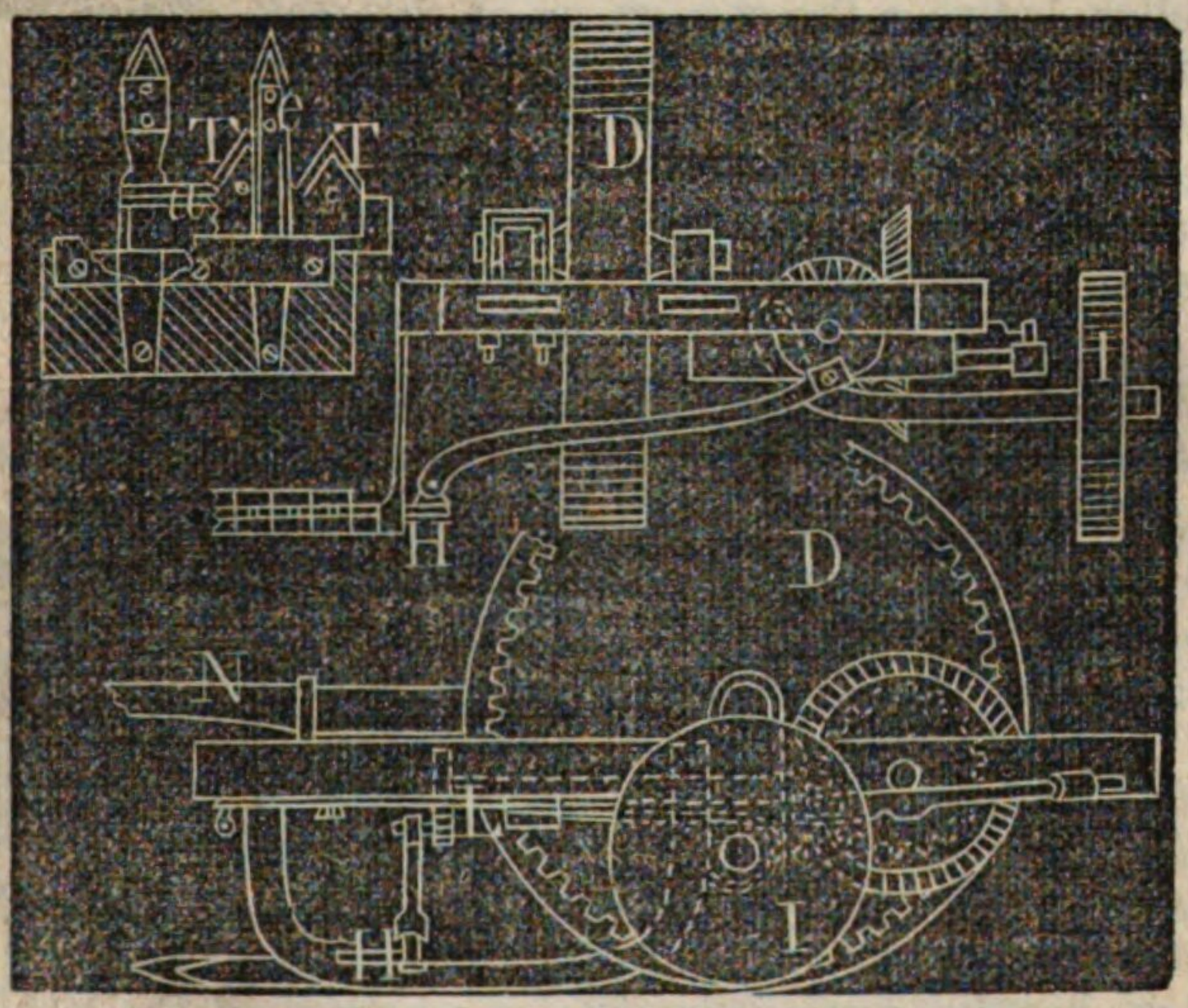


in slots *i i* in the bosses or hubs of the pulleys *f f*; these pulleys *f f* having the chains *j j* attached to them and to the upper ends of the gate-stiles *c c*, and also the chains *j j* with the weights G G; the said chains *j j* being attached to the lower ends of the stiles *c c*; the gate being prevented from being casually depressed or opened by means of the pawl J, which is freed from the notch *p*, in the boss or hub, by the dog L, substantially as set forth in the specification.

No. 10,200.—GEORGE WILLISTON, of Brunswick, Me.—*Improvement in Straightening or Curving Rails of Railroads*, &c.—Patented November 1st, 1853.

Claim.—The combination of the screw, strap, beam, and slides, constructed and combined substantially in the manner described; with the beam placed on the top or side of the rail, for the purpose of straightening or curving rails on railroads, without the necessity of removing the same from the sleepers.

No. 10,201.—SAMUEL S. ALLEN, of Salem, N. J.—*Improvement in Harvesting and Mowing Machines.*—Patented November 8th, 1853.

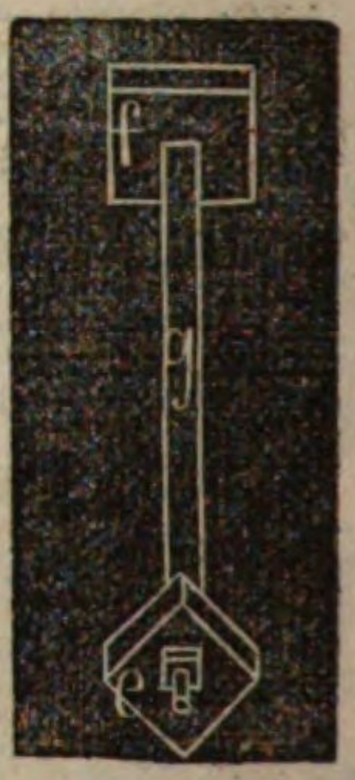


The nature of this invention consists in balancing the frame-work and gear operating the cutters on the driving-wheel, as a centre of oscillation, and thus balancing the weight of the arm and cutters thereon; also, in an arrangement of the tongue between the driving-wheel and the cutter-arm or beam, so as to constitute a centre draft, by the application of the adjustable secondary wheel on the side of the framing opposite to that of the cutter-arm, and thus obviate the tendency to swing around against the shoulder of the horse; also, in other improvements which are explained in the claims of the inventor.

Claim.—The arrangement by which the driving-wheel D is made the centre of oscillation, in counter-balancing the cutter-beam and

cutters thereon, embracing the secondary wheel I and spring L for the purposes set forth. Also, the combination of the tongue N with the driving-wheel D and secondary wheel I. Also, the method of balancing the cutter-blades T on the angular bar *a* by the sliding-bar H, in combination with the blade *e*, or their equivalents. Also, the construction of the cutter-blades, as formed on the under side with a rasp or roughened surface, while the upper side forms a shear-cutting edge, for the purpose of preventing choking of the fingers, and supplying an oil-box to the cutter-bar, as set forth in the specification and drawings.

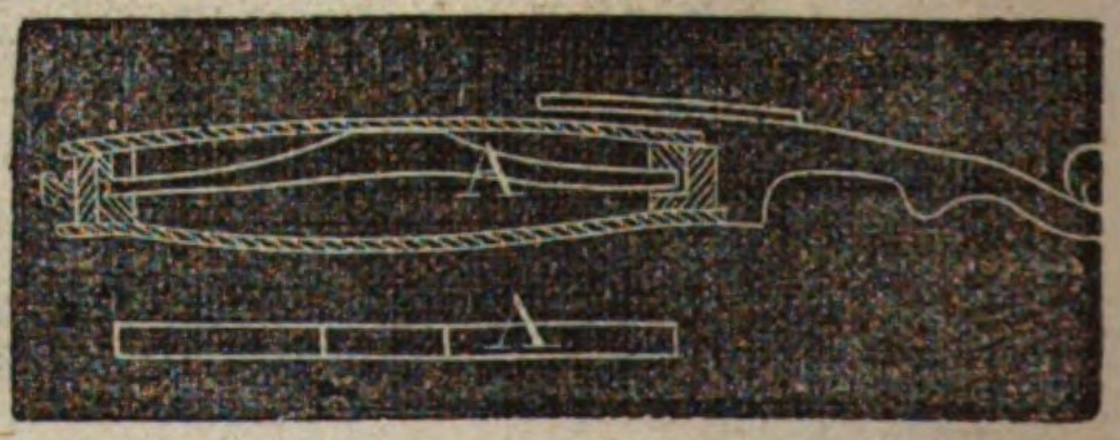
No. 10,202.—JOHN BLUE, of Covert, N. Y.—*Improvement in Machines for Separating Grain from Straw.*—Patented November 8th, 1853.



This improvement is confined to what the inventor denominates a "shaker." It consists in connecting the cornered roller on either side to another on the other side opposite, with the same number of corners or arms, by fastening both on a shaft, in such a manner that when either side of the belt rests upon one corner or arm of the roller on that side, the other side rests upon the side of the roller, between the corners or on the ends of two arms, for the purpose of agitating the straw and grain while passing over the endless slotted apron.

Claim.—The arrangement of the cam-blocks *f* and *e*, or their equivalents, on the shaft *g*, for agitating the endless apron, as set forth.

No. 10,203.—CORNELIUS S. COOPER, of New York, N. Y.—*Improved Bass-Bar for the Violin.*—Patented November 8th, 1853.



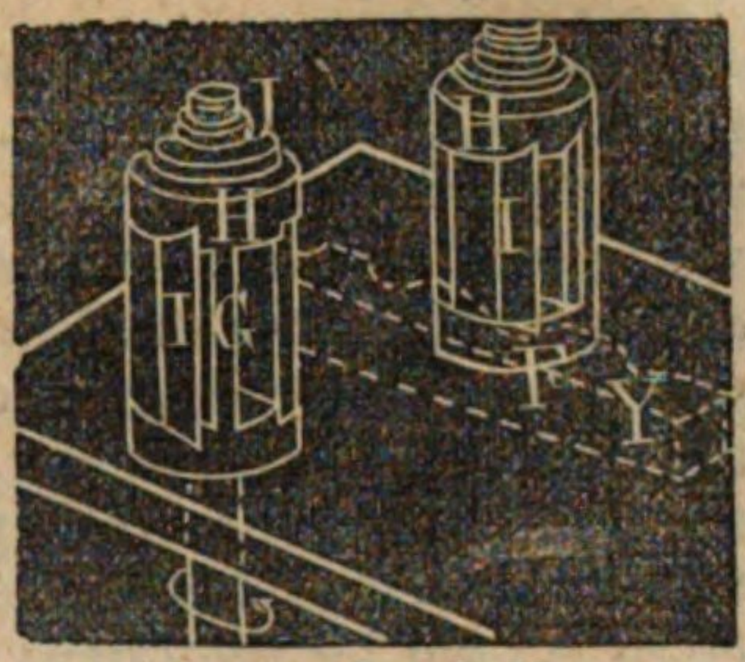
A represents the bass-bar.

Claim.—The application of the *spring bass-beam* or *bar*, in place of the solid beam, which is taken from the violin, for the *violin*, *tenore* or *viola*, *violoncello*, double bass or *violono*, or any other instrument requiring a bass-beam or bar for the production of tone; then the support of the ends of the spring or improved bass-bar, by cutting notches or mortises in the end-blocks, as shown in the figure, and supporting said ends of spring in any manner, by connecting the bearings of the spring to the end-blocks to produce the desired effect. Also, the separation of the bass-bar or beam from the top or sound board, except three inches, which will produce the desired effect.

No. 10,204.—NATHANIEL GEAR, of Zanesville, Ohio.—*Improvement in Machines for Cutting Irregular Forms.*—Patented November 8th, 1853.

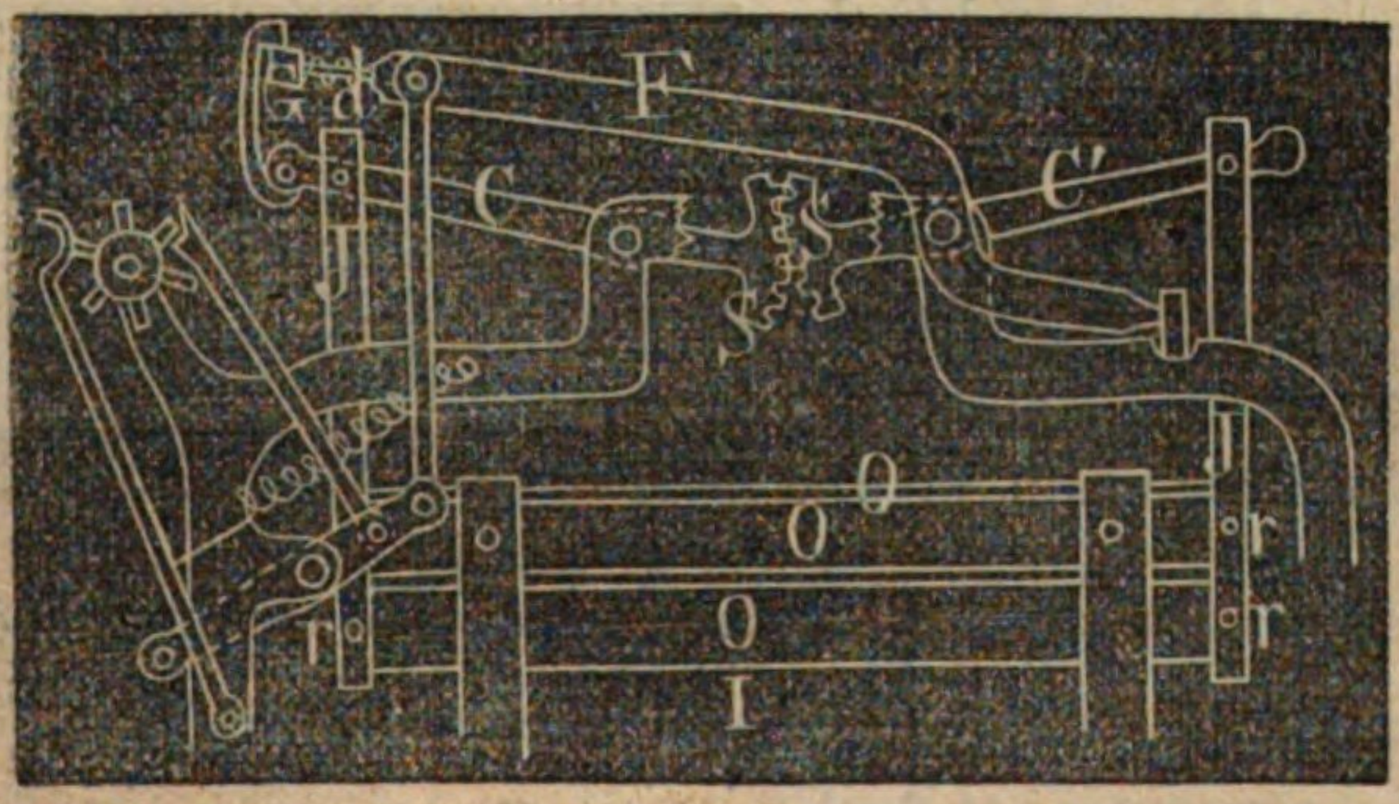
F, lower cutter-head; G, brace supporting the upper cutter-head H,

which is removable; G also forms a throat to the cutters; the cutters I are set in the inclined grooves in the upper and lower cutter-head, and fastened by screwing down J. To cut a duplicate of the pattern Y, the material is placed on top of it, and held there by some sharp projections in the upper side of Y. The two pieces are fed along by hand in the direction of the running of the cutters, which draws them tight up against the lower cutter-head. The cutters work upon the edge of the piece to be cut, whilst the cutter-head receives the pattern and prevents it and the piece upon it from coming any closer to the cutters than a fixed distance. The knives are gauged by the cutter-head, and the pattern is guided by the cutter-head also, which serves as a guage to the pattern.



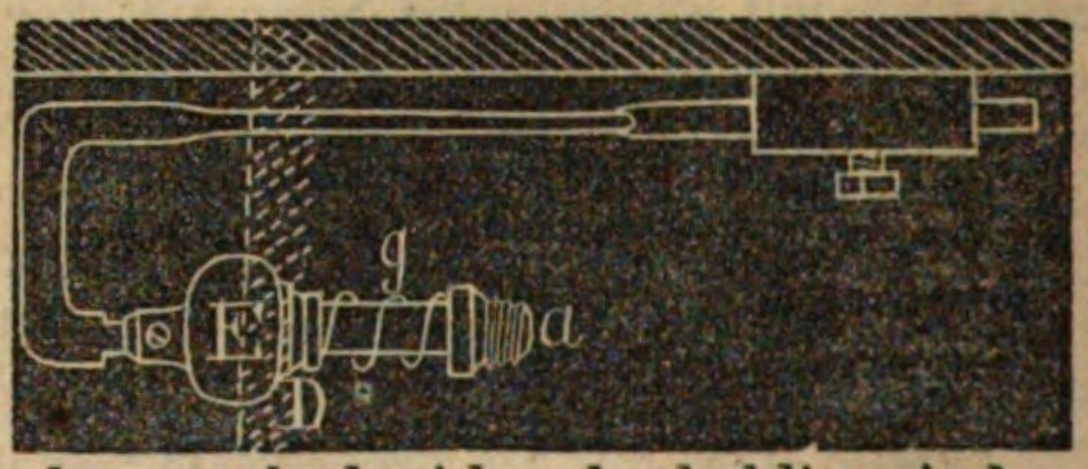
Claim.—The combination of knives in the manner described with a rotary cutter-head, so that said head shall serve as a guide or directrix to the form or pattern carrying the material to be dressed.

No. 10,205.—James Greenhalgh, Jr., of Waterford, Mass.—*Improvement in the Harness Motion of Power-Looms.*—Patented November 8th, 1853.



Claim.—Suspending each leaf of harness from two jacks c c′, which are of similar form and length, and are geared together by toothed sectors s s, for the purpose of preserving a uniformity of motion to both ends of the harness. Also, attaching the knife G to the levers F F, and applying springs *d d* to the same, in such a way that it will move on the levers in its descent, in closing the shed sufficiently to pass the points of those hooks of the ascending portion of the harness which are in a position to be raised to make the succeeding shed, and after passing the points of the hooks will slip under them substantially as described. Also, suspending the heddle-frames I I, or the top rails *o o*, by means of sheet or hoop iron links J J, which are pivoted to the jacks, and are furnished with pins *r r* to enter slots or notches in the ends of the top rails *o o*, by which a simple means of attachment and detachment is obtained.

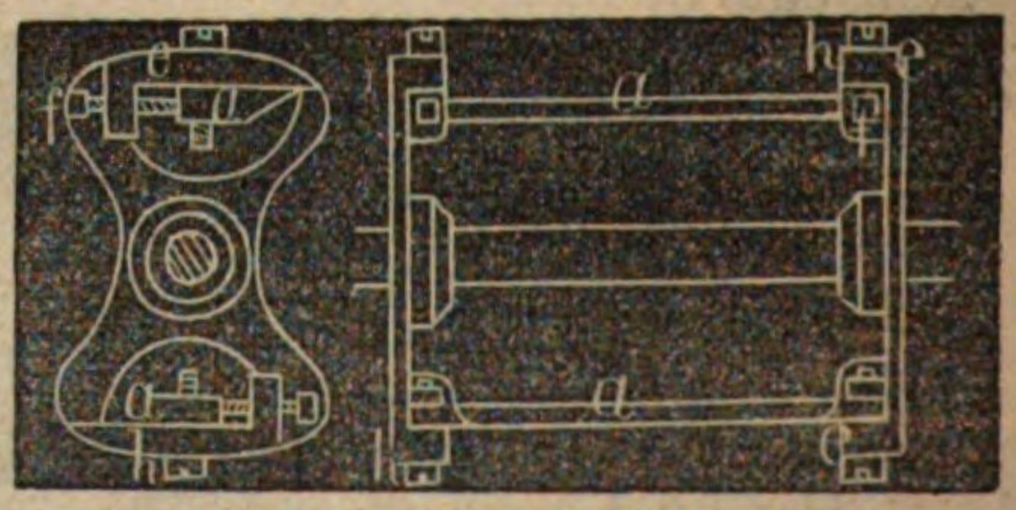
No. 10,206.—Jerome B. Greene, of Worcester, Mass.—*Improvements in Temples for Looms.*—Patented November 8th, 1853.



This temple consists of a roller, which turns freely on an axle placed parallel with the weft; and it is surrounded, or partially surrounded by a guard, which is adjustable on the same axle. The roller and the guard keep the cloth properly stretched, either by holding it between two conical surfaces, or by pins on the roller, upon which the cloth is held by the guard; the roller being kept in position for holding the cloth by a spring, which will allow it to be withdrawn when necessary. The axle upon which the temple turns forms part of an elastic stem, which gives the temple the necessary elasticity.

Claim.—The arrangement of the roller D, adjustable guard E, and springs *g*, upon the axle *a*, which is parallel with the weft, whether the roller and guard hold the cloth between two conical faces, or by teeth on the roller.

No. 10,207.—John Jones and Alexander Lyle, of Rochester, N. Y.—*Improvement in Machines for Cutting Straw.*—Patented November 8th, 1853.



The knives *a* are secured to the inside of the flanges *e*, in order to prevent them from overreaching and cutting into the mouthpiece of the box containing the straw. *f*, set-screws for regulating the knife; *h*, bolts which hold the knife on the inside of the flanges.

Claim.—The combination of the knives and segments of flanges (which are attached to, and form a part of the heads), the knives being placed on the inside of the flanges, instead of the outside, in the manner and for the purpose set forth.

No. 10,208.—Samuel Karns, of Bloody Run, Pa.—*Improvement in Machines for Hulling Clover-Seed.*—Patented November 8th, 1853.

This invention consists in a new method of constructing the teeth of the concave and cylinders, by forming them of wire, and securing them to sheets of leather or other elastic substance, which are made fast to the faces of the cylinder and concave; the teeth thus formed having the quality of elasticity, which allows them to yield, and pass any accidental obstruction that may occur when the machine is in operation, while the wearing away of the leather is retarded by encasing it with wire or thin bands of metal.

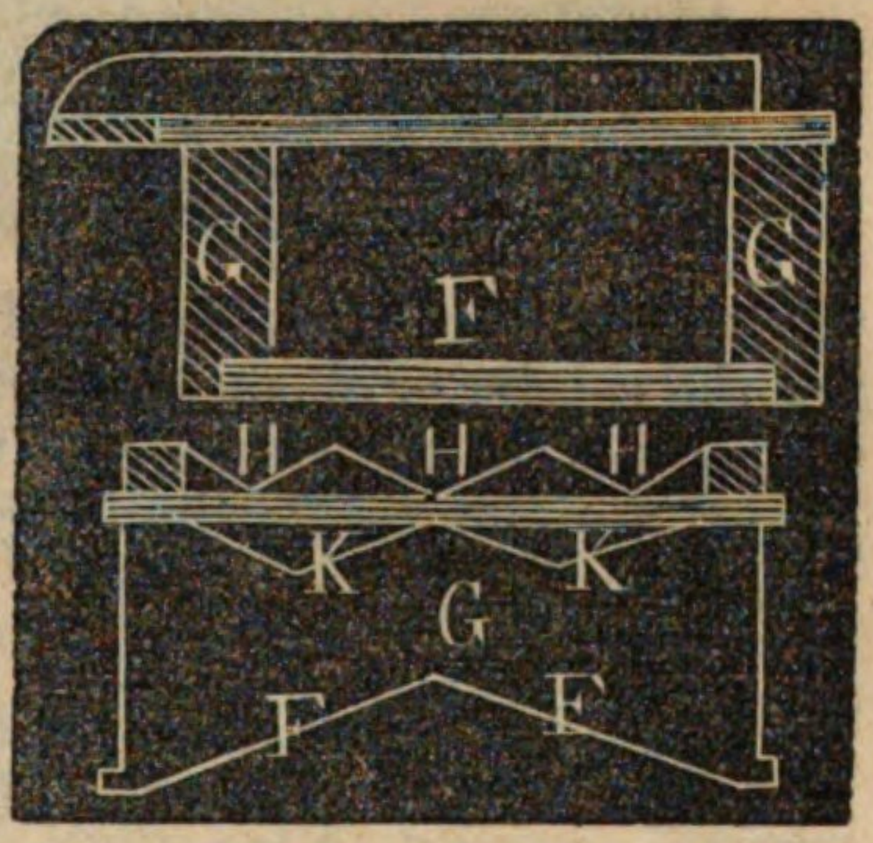
Claim.—The binding of the teeth to the hulling-cylinder by means of the wire band, as set forth.

No. 10,209.—JONATHAN KNOWLES, of Cohoes, N. Y.—*Improvement in Looms.*—Patented November 8th, 1853.

This invention relates to the mechanism for letting off the warp from the warp-beam as the weaving progresses; and consists in arranging what is termed the tension or whip-roll, which is hung in the usual manner upon the arms of a vibrating lever, to roll up and down inclined guides in its vibrations, to accommodate itself to the length of the yarn unwound from the warp-roll.

Claim.—The combination of inclined guides with the whip-roll, for the purpose of graduating the tension of the warps.

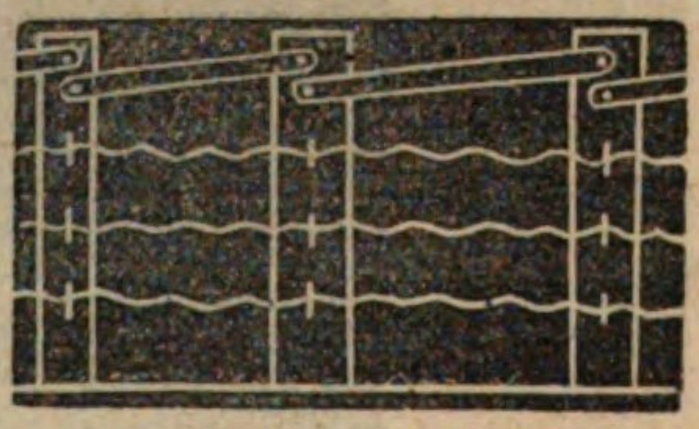
No. 10,210.—ABRAHAM LASH and MILES MOORE, of Bellville, Ohio.—*Improvement in Grain-Cleansing Machines.*—Patented November 8th, 1853.



H, flutes in the upper cleanser, which keeps the grain continually rolling by means of a vibratory motion, in order to obviate clogging. The flutes K in the under cleanser serve the same purpose.

Claim.—The two fluted cleansers, or their equivalents, and the combination of said cleansers. (They may be used in any common winnowing machine).

No. 10,211.—WILLIAM H. MERIWETHER, of the County of Comal, Texas.—*Improvement in the Construction of Wire Fences.*—Patented November 8th, 1853.

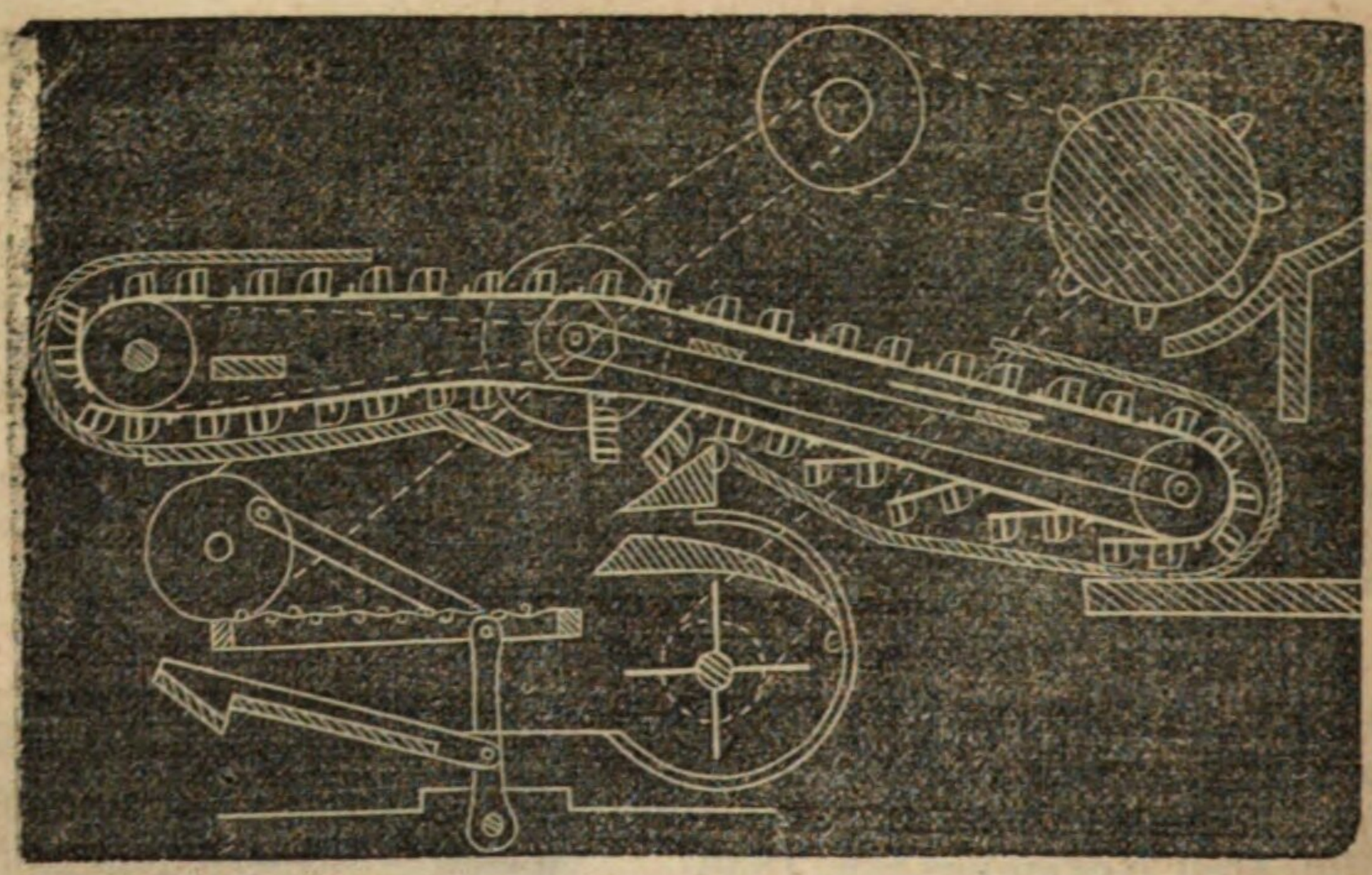


Claim.—The employment of the undulating or zig-zag wire for fencing, which, by its elasticity, increases the durability and effectiveness of the fence.

No. 10,212.—ABRAM B. PETERSON, of Dexter, Mich.—*Improvement in Machines for Separating and Cleaning Grain.*—Patented November 8th, 1853.

By reference to the figure, the claim explains this improvement.

Claim.—The raddle A, with swinging sections, in combination with the interior carrier or elevator B, to separate the grain from the straw, and discharge the grain on the riddles under the head of the carrier or elevator B, with the effect of permitting the cylinder and concave to be set low down; the whole operating substantially as set forth. Also, the running of the raddle A and carrier or elevator B on separate and independent pulleys, in the manner and for the purposes herein described. Also, the introduction of the protecting apron H between the carrier or elevator B and raddle A, to serve the double purpose of



preventing the straw from driving through the raddle A, and protecting the carrier or elevator B from abrasion by the grain. Also, hanging the riddles, or the riddle and wheat-board, to upright standards W, to give the upper riddle the longest stroke.

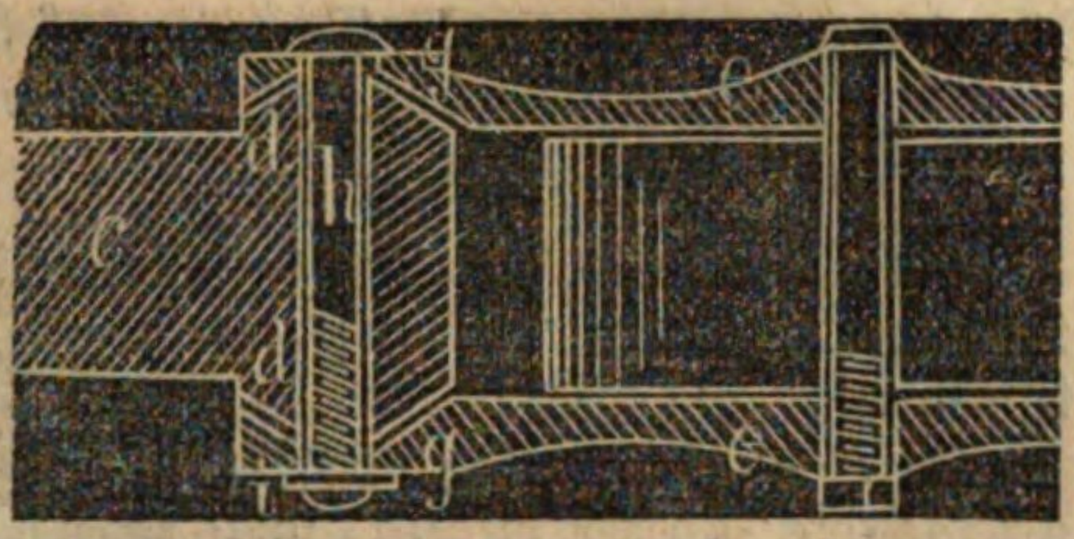
No. 10,213.—William Robertson, of New York, N. Y.—*Improvement in Violins and other Stringed Musical Instruments.*—Patented November 8th, 1853.

The performer presses his fingers on the projecting keys *a*; the string, which is just below the *supplemental finger-board*, will be pressed against the lower finger-board.

Claim.—Combining with the finger-board of a violin, or musical instrument of like character, a supplemental keyed finger-board, constructed and operating as described.

No. 10,214.—Safford E. Sturtevant, of Hartford, Vt.—*Improved Mode of Attaching the Shafts of Vehicles to Axles.*—Patented November 8th, 1853.

This attachment consists of an eye or collar, having taper or conical ends, which fit in adjustable sockets. The eye or collar may be attached to the shaft, and the sockets to the clasps which encompass the axle; or the eye or collar may be attached to the



clasps, and the sockets to the shafts.

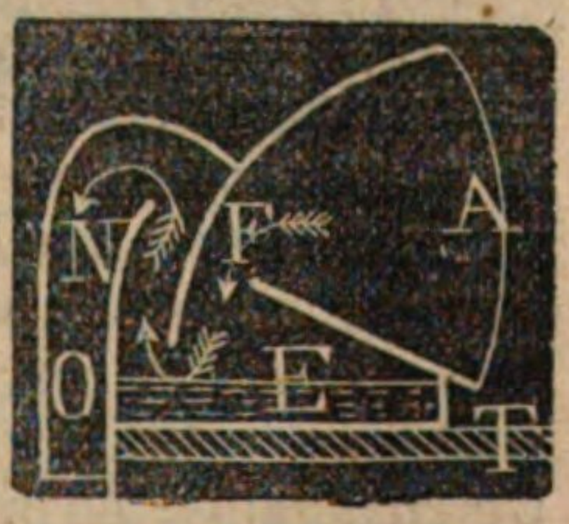
Claim.—Securing the shafts of vehicles to axles by means of an eye or collar c, having taper or conical ends *d d*, which fit in adjustable sockets *g g*; the ends *d d* of the collar c being kept firmly in the sockets by means of the screw-bolt *h*; the collar and sockets being attached to the shaft and axle in either of the modes herein described.

No. 10,215.—Thomas Spiller, and Anthony Crowhurst, of No. 5 Red-Lion Square, in the County of Middlesex, England.—*Improvements in Propelling Steam-Vessels.* — Patented November 8th, 1853.

This invention consists in the application of vanes, blades, or fins, mounted upon an axle which has free motion in the bearing of a frame, which frame slides vertically in a groove or guide prepared for it in the dead-wood of the stern or any other part of the vessel below the water-line—an alternating vertical motion being communicated by suitable mechanism. The vanes, blades, or fins are moved up and down through the water, and assume an angle of resistance to it, which is regulated by a suitable arrangement of stops. The angular position which the vanes or blades assume in their motion through the water is similar, somewhat, to that of the tail of a fish.

Claim.—Vanes, blades, or fins of whatever form, or wheresoever applied in a vessel for the purpose of propelling the same, when such vanes, blades, or fins are mounted on an axle or shaft vibrating or turning freely upon its axis, and moving vertically through the water.

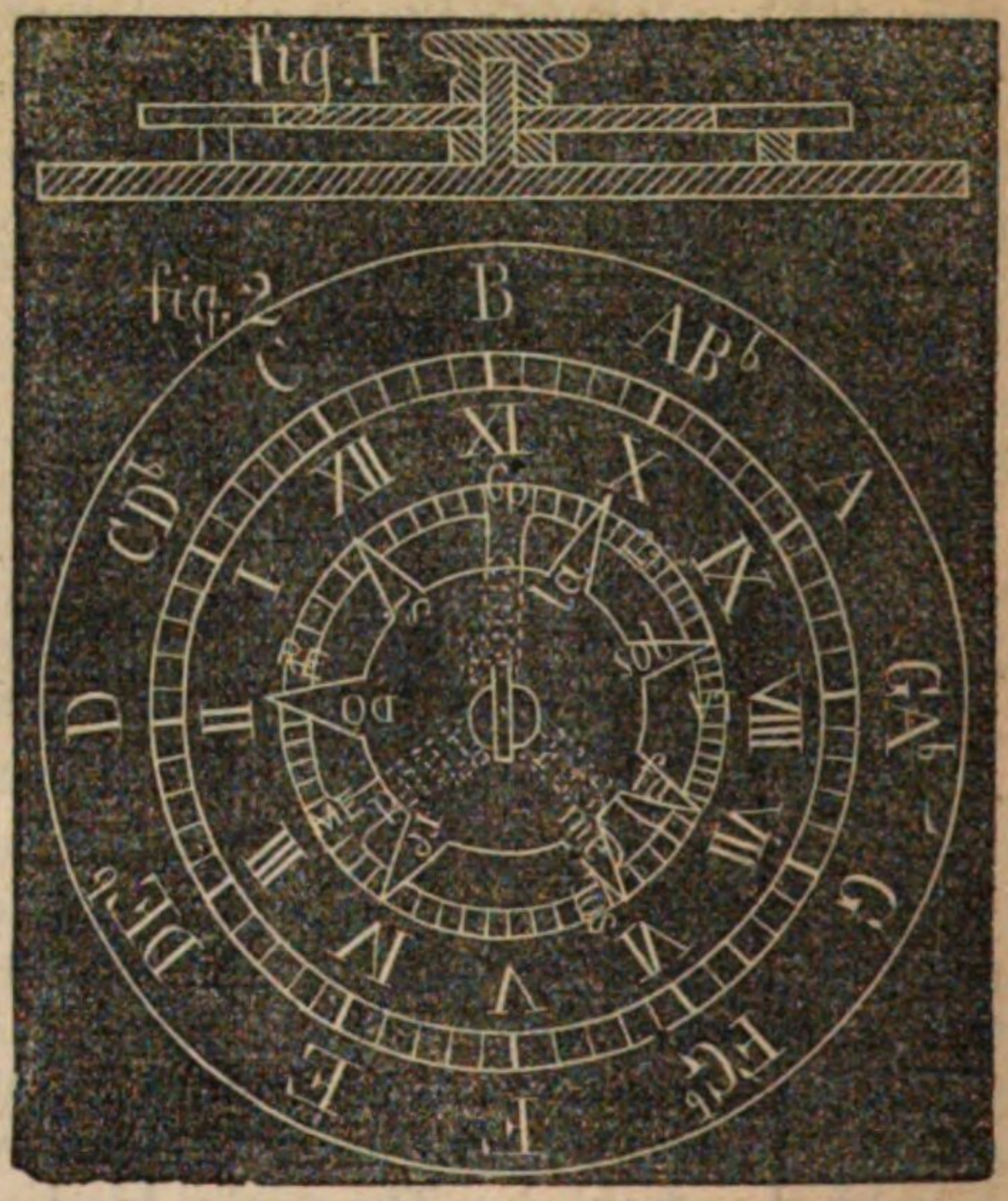
No 10,216.—George Spencer, of Utica, N. Y.—*Improved Apparatus for Ventilating Railway Cars.*—Patented November 8th, 1852.



The figure represents the form and construction of this ventilator. A is the mouth for the reception of the air; F, the narrow throat of the mouth; E, stratum of water; N, the barrier to prevent the water from being dashed over into the car through the conductor o. The ventilator is placed on the side of the top of the car, and the current of air is produced by the motion of the car or cars.

Claim.—The application of a single "throat," being the termination of a "gathering" or gradually contracted opening, in combination and immediate connection with a single enlarged air-chamber, directly above a surface of water, for the purpose of freeing the air forced into the car from dust and cinders, thus enabling the dust and cinders to fall upon the water by their own gravity alone.

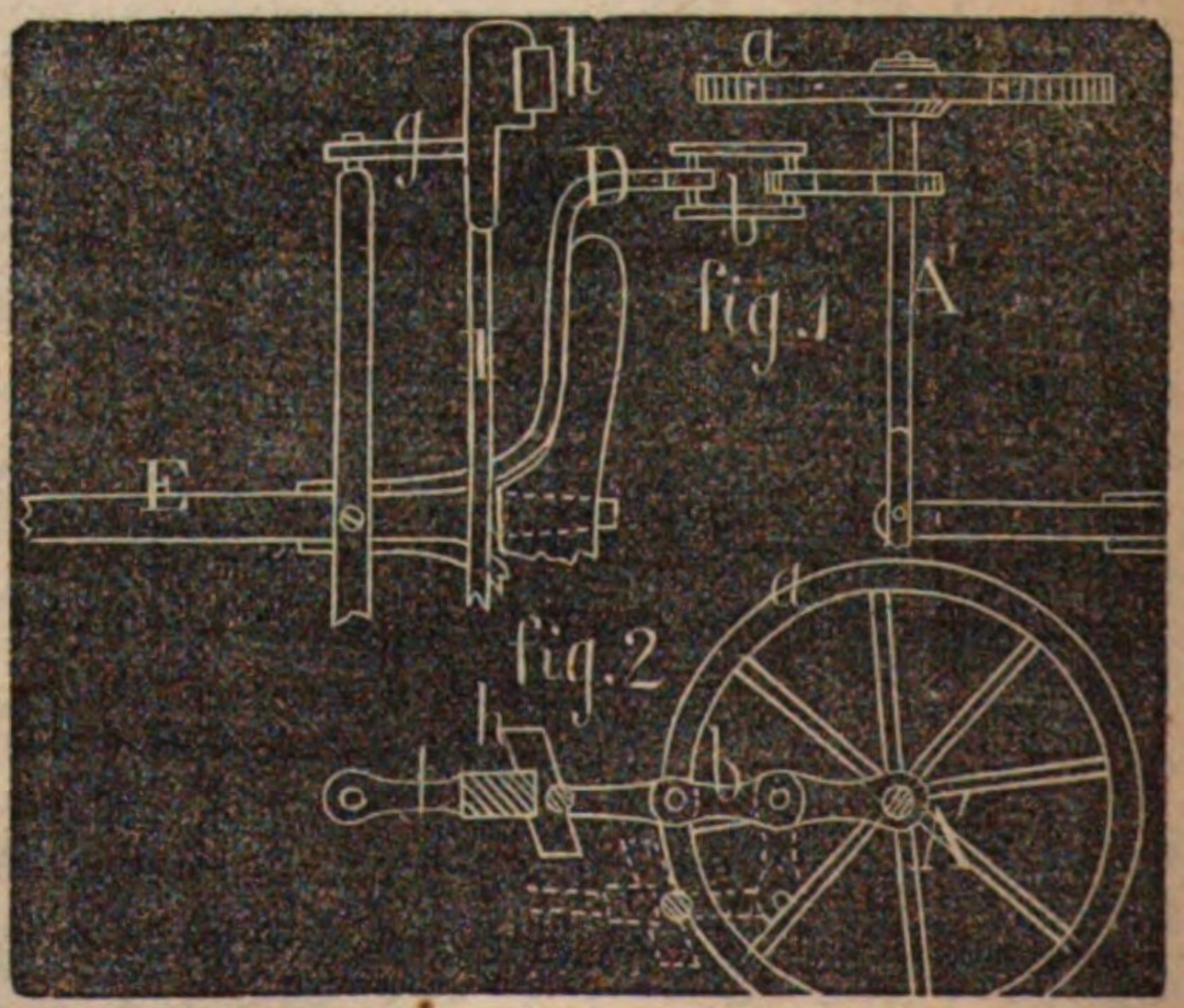
No. 10,217.—Samuel D. Tillman, of Seneca Falls, N. Y.—*Improved Method of Illustrating and Measuring Musical Intervals.*—Patented November 8th, 1853.



By reference to the annexed figure, the claim will explain this invention.

Claim.—The employment of a fixed disk, on which the musical intervals within the octave are represented by divisions of a circle, and the letters commonly used to designate the notes of the fixed scale, in combination with one or more arms, disks, or rings, rotating around the centre of the circle of the fixed disk; on which rotating arms, disks, or rings, are the true and tempered divisions of the diatonic scale, so arranged that the relations of those divisions of the diatonic scale with those on the fixed scale may be clearly seen, when the point designating the tonic or key-note on the moving scale is placed opposite any of the divisions of the fixed scale.

No. 10,218.—W. D. Williams, of Raleigh, N. C.—*Improvement in Wagon-Brakes.*—Patented November 8th, 1853.

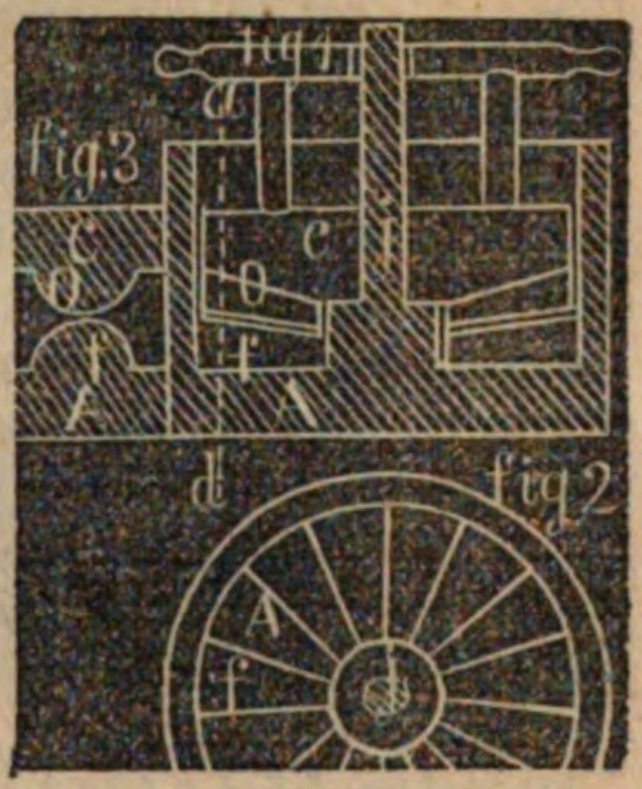


a, one of the front wheels; A, front axle; E, tongue; *h*, brake. When the wagon moves on a level, the brake will be disengaged from the wheel, as seen in fig. 2; but if moving down an inclined plane, the brake will be thrown in the position represented by dotted lines in the same figure, and the carriage will press with its whole weight against the brake.

Claim.—Forming two swinging or rolling joints between the front axle A and the front hounds D D, in combination with the swinging brake I, *h h*, *g g*, arranged on top of the reach and in front of the wheels, for the purpose of rendering the wagon more perfectly self-locking, or for applying the brakes simply by the aid of the

horse and wagon, and disengaging them by the forward action of the former, the whole being constructed and operating as set forth. Also, making the brake capable of swinging on a centre, so that it may be thrown over towards the front of the reach when it is desired to dump the load, and again thrown to its proper place after dumping.

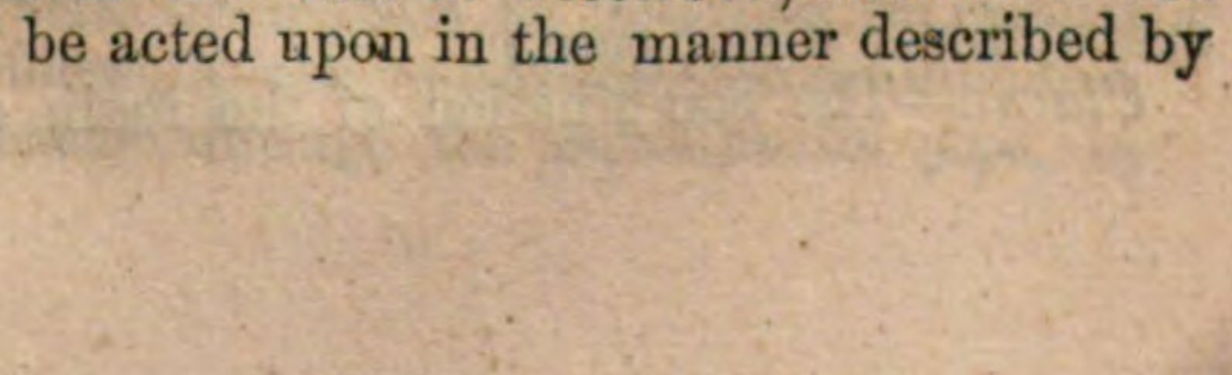
No. 10,219.—Joel Wisner, of Aurora, N. Y.—*Improvement in Washing Machines.*—Patented Nov. 8th, 1853.



The nature of this invention consists in constructing the interior surface of the tub at the bottom of the tub and under side of the rubber with radial ribs, in the form of semi-frustums of cones, with their larger bases towards the exterior of the tub and perimeter of the rubber; the under surface of the rubber being bevelled outward and upward, so that the elements of the ribs on both rubber and bottom which are farthest from said surfaces, will be parallel when the ribs have the position shown in figure 3, which represents a section through *a d*.

Claim.—Making the wash-board of a conical form, having its surface higher above the bottom of the tub at the circumference than at the centre, and attaching to it and to the bottom of the tub radial ribs, of the form of a half cone, when these ribs are formed of such depth, and with spaces so wide between them, as to receive the clothes in those spaces, in such manner as to turn or roll them over as the board is rotated back and forth.

No. 10,220.—Samuel Greene, of Lambertville, N. J.—*Improvement in Bolts or Locks for fastening Doors, Shutters, &c.*—Patented November 8th, 1853.



B is the bolt; C, case of the bolt; R, case to receive the end of the bolt when locked; D, knob sliding in a slot S in the case; E, spring, with one end fastened in the bolt, and fitting in a recess N; when drawn out, as shown in figure, the other end of the spring leaves the recess N and falls into recess G, thereby acting as a stop; at the same time the drop H, which slides in a groove in the back of the bolt, will fall into recess I, thereby acting as another stop; a key to fit in a hole in recess G is used to unlock the spring and drop when required.

Claim.—The spring and drop, or tumbler, arranged with reference to each other and the notch in the case as described, and so formed and located that they may be acted upon in the manner described by a single key.

No. 10,221.—ALEXANDER C. TWINING, of Hudson, Ohio.—*Improvement in Refrigerating Process and Apparatus for making Ice and other like purposes.*—Patented Nov. 8th, 1853.

Claim.—The combination of an exhausting pump or apparatus that is also condensing or compressing, with a restorer, and with a freezing cistern having water-chambers. Also, the same pump and restorer in combination with a separate exhaust-vessel, in or around which the ether or other liquid uncongealable at the temperature employed is cooled and made to pass into the freezing cistern and there perform its office. Also, the percolator, or apparatus introducing into the cistern, or the separate exhaust-vessel, the ether or volatile liquid, in jets or drops, in combination with the exhaust-pump and restorer. Also, the use of the water-vessel, in combination with the water-chambers and the intervening liquid for perfecting contact, as set forth. Also, in combination with the restoring apparatus, the cooling of the liquid around the same by exhaustion, using therefor the secondary pump and connections.

No. 10,222.—ERASTUS B. BIGELOW, of Boston, Mass.—*Improvement in Looms for weaving Looped and Velvet Pile Fabrics.*—Patented November 15th, 1853.

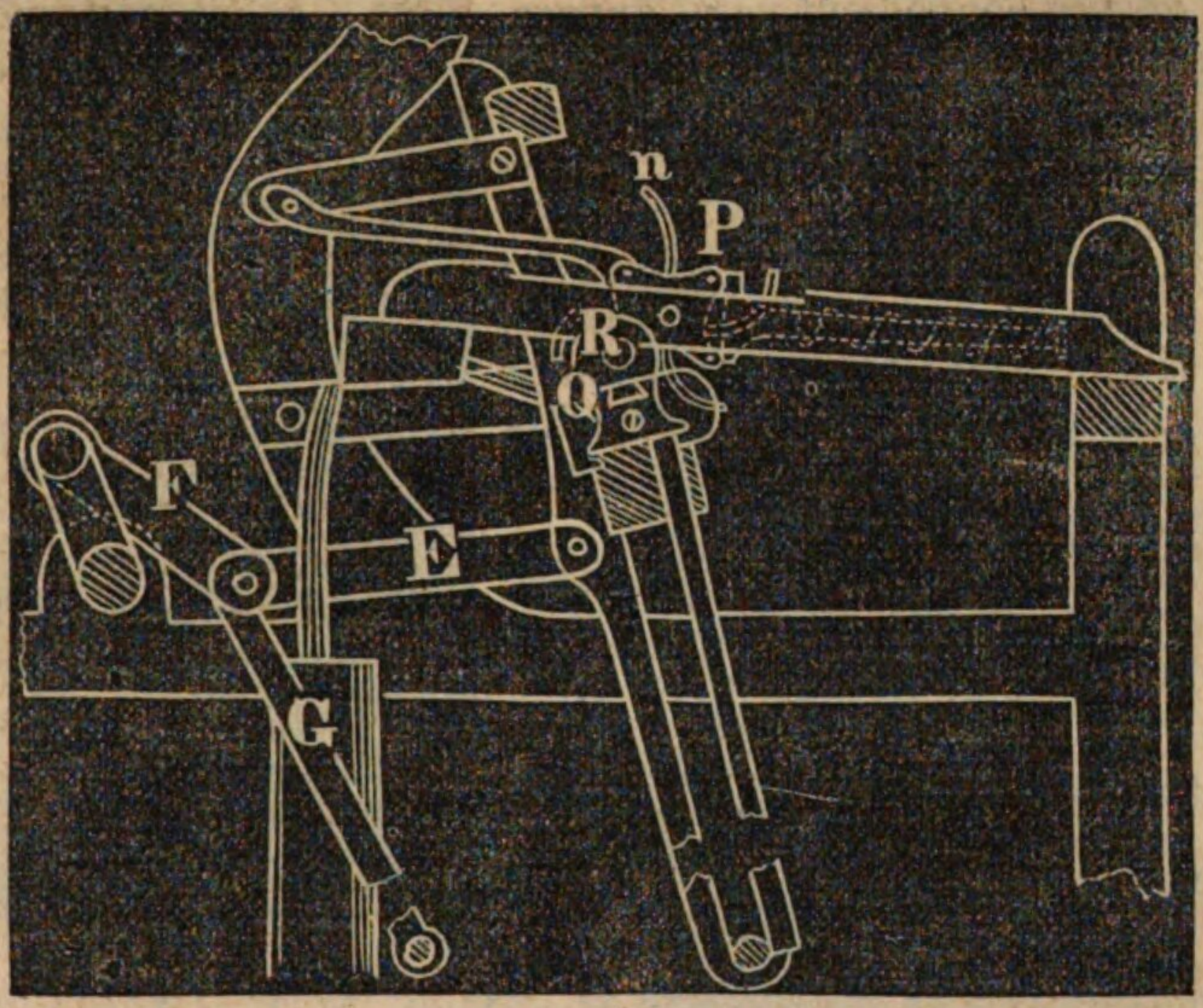
(This improvement is too complicated to admit of a brief description of its nature and operation.)

Claim.—The method of constructing and operating the pincers or their equivalents for successively operating the pile-wires, so that they shall carry said pile-wires forward to the face of the cloth, and hold them in position with their proper edges upwards until they are otherwise secured. Also, constructing the pincers for successively operating the pile-wires with grooved jaws, opening and closing in a line with the pile-wire and with a motion in advance of the lathe, whereby collision with the lathe is easily avoided. Also, the application of long horizontal guides. Also, the application of a vibrating box or holder, in combination with the pincers, or their equivalents, for successively operating the pile-wires. Also, in combination with the pile-wires, a bar or guide, which shall successively press against the pile-wires, to keep them in proper position during the operation of cutting. Also, the method of applying the tension-weight and brake to the whip-roller by means of the arms. All in the manner and for the purposes set forth in the specification.

No. 10,223.—JOHN GLEDHILL, of New York, N. Y.—*Improvement in Power-Looms.*—Patented November 15th, 1853.

The improvements which constitute this invention are for the most part intended only to be applied to the weaving of hair-cloth. That part relating to the lay motion, however, is applicable to looms of every description. (See figure.)

Claim.—The combination of the main connecting-rods E, links F,



and radius-rods G, for giving the lay a motion, the forward part of which is accelerated, and the backward part retarded, for the purpose set forth. Also, the "automatic server," consisting of a block or head P, furnished with any number of hooks *n*, or analogous devices, arranged in any number of series, according to the number of bunches of filling hair or threads, and in order of succession; the said block or head being hung, substantially as described, on a pivot, in such a position that when a proper amount of circular motion is given to it by suitable mechanism, the hooks will withdraw the hairs from one or other of the bunches, and bring them to a suitable position to be taken by the nippers or other device which draws them through the warp. Also, a pair of nippers, Q R, which are operated by suitable mechanism, to make their jaws pass through the warp from one side thereof every time the shed is opened, seize one or more hairs or threads from the opposite side, and return through the open shed with the same, and release the same when it is beaten up and the shed is closed. Also, the combination of the fixed stud, finger, lever, spring, and arm, as described, the stud, finger, and spring being for the purpose of producing a proper tension on the hairs or threads as they are being drawn through the shed, and the lever and arm being for the purpose of moving the finger, to allow the nippers to pass in coming to fetch the hairs or threads.

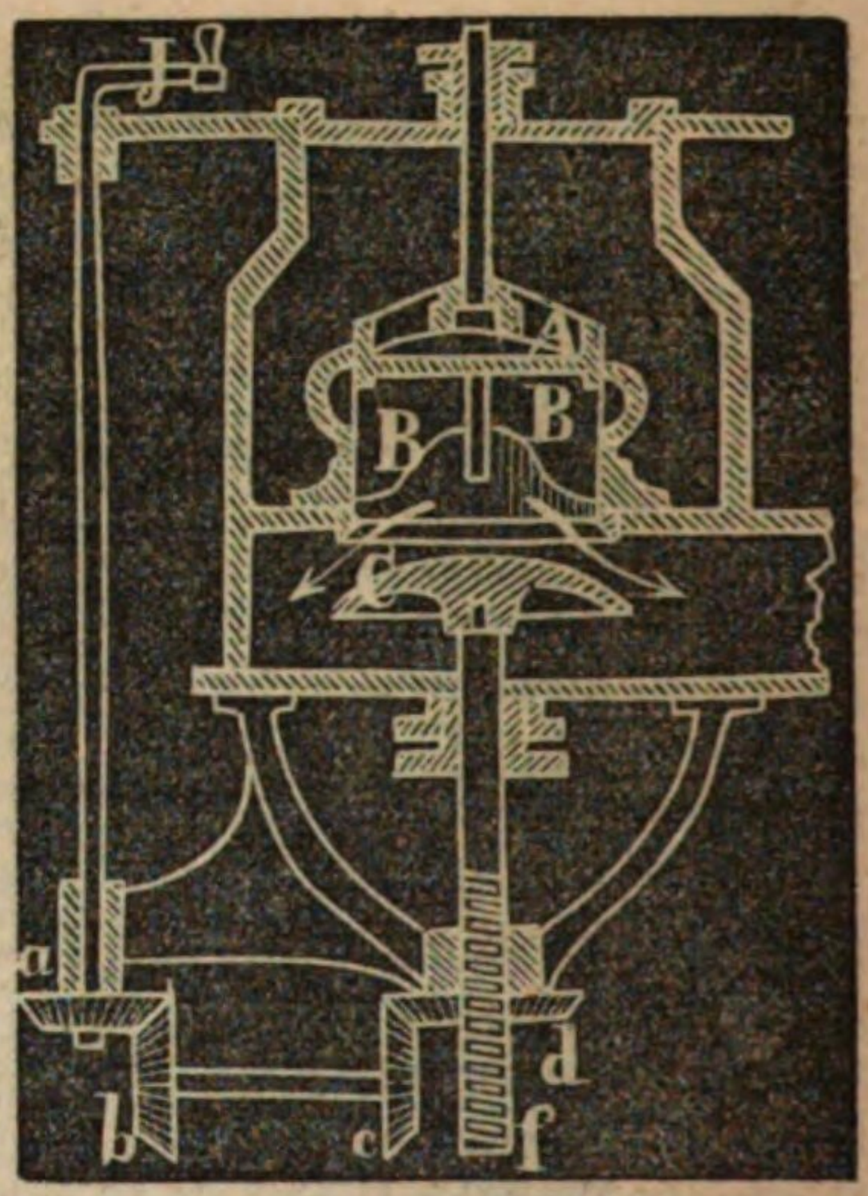
No. 10,224.—Henry P. M. Birkinbine, of Philadelphia, Pa.—*Improved Mode of Regulating the Motion of Pumping Engines.*—Patented November 15th, 1853.

This invention relates to that description of pumping machinery generally known among engineers as the "Cornish engine," and consists of intercepting the passage through the equilibrium pipe, by

means of any convenient valve-apparatus, in connection with machinery for regulating the same.

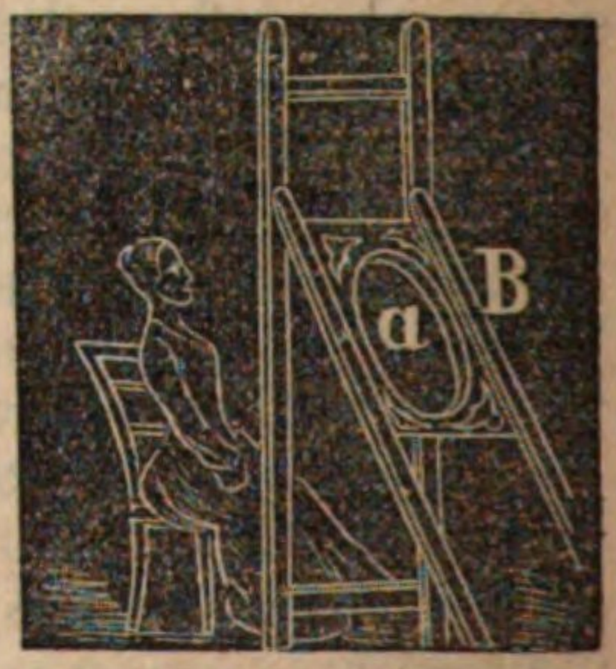
A is the equilibrium valve; B, the valve seat, which also forms a seat for the supplementary valve C; J, crank; *a b c d*, bevel-wheels; *f*, screw-spindle, which serves to bring C further from or closer to its seat, thereby obstructing more or less the passage of the steam from the equilibrium-valve.

Claim.—The use of the adjustable valve-apparatus, or any equivalent to the same, for intercepting more or less the steam in the equilibrium passage, so as to regulate the rapidity of descent of the plunger, according as the head of water may require.



No. 10,225.—James Brown, of New York, N. Y.—*Improvement in Daguerreotype Apparatus.*—Patented November 15th, 1853.

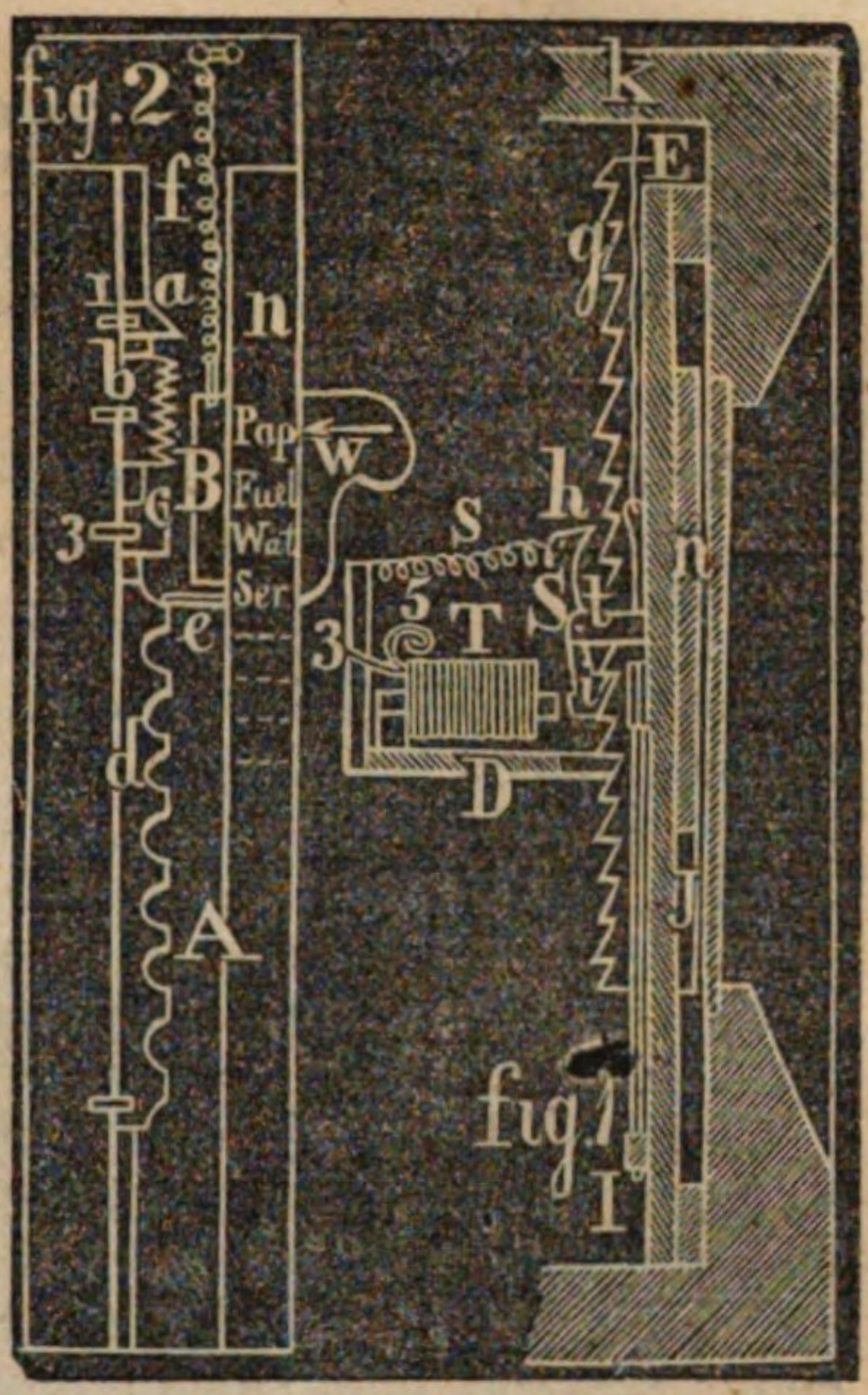
The nature of this invention consists in the employment of an ornamental diaphragm, with a suitable opening placed in a suitable position in front of the person to be represented, for the purpose of producing a portrait or picture, with an appropriate or tasteful ornamental border, either with or without the name of the person or subject, and the name of the artist.



Claim.—The employment of a diaphragm, with a suitable opening through which the person or subject is presented to the camera, when the opening is surrounded by ornament or embellishment, for the purpose of producing a portrait or picture with an ornamental or embellished border.

No. 10,226.—Charles S. Bulkley, of New York, N. Y.—*Improvement in Electro-Magnetic Annunciator for Hotels.*—Patented November 15th, 1853.

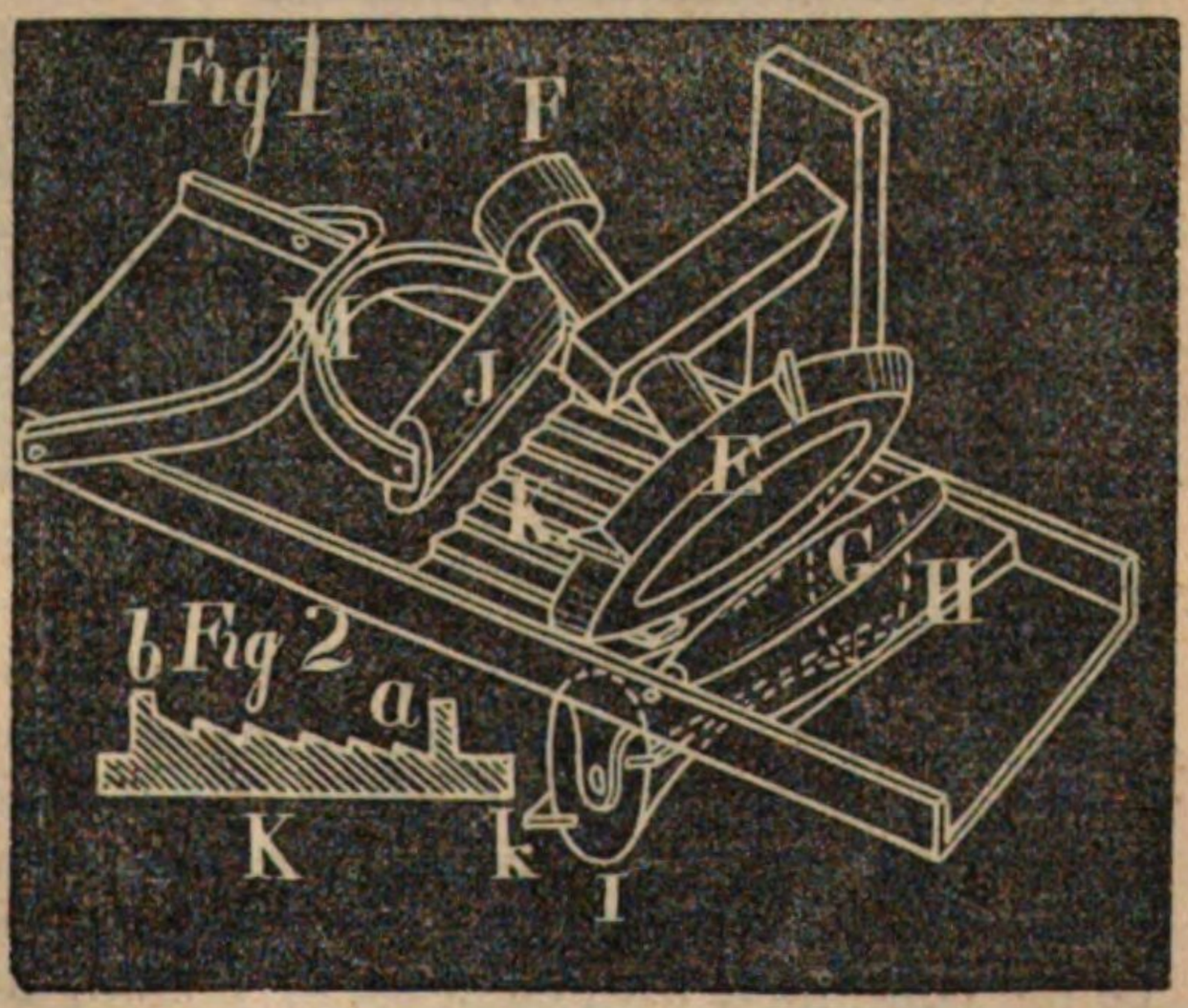
This annunciator consists of circuit closers placed in the several rooms of the hotel, and a register situated in the office of the hotel, a branched circuit of insulated wires connecting the several circuit closers with the register and a galvanic battery. When the guest wishes any thing at the office, he grasps the key B (situated in his room, and always kept drawn back by the spring *f*, except when in use), and draws it forward directly under the word which expresses his desire. By this action the pin *e* first closes the circuit with the plate *a*, which causes the bell K to strike; it then comes in contact successively with all the points of the plate *b*, whereby the



circuit with its wire is closed six times, by which the magnet w is magnetized that number of times, and consequently six teeth of the rack F are allowed to pass down by the escapement lever s, and the figure "5" is brought in sight on the face of the register; it then closes the circuit once with the plate *c*, whereby the magnet T is once magnetized, and a single tooth of the rack E allowed to escape, exposing the cipher on the face of the register; thus the number of the room (50) is communicated at the office. It then closes and breaks the circuit with plate *d* a certain number of times, according to the order in which the word he desires to communicate is arranged over the key, whereby the rack *g* is brought down that number of notches by the magnet *p*, and exhibits the corresponding word on the face of the register, where the word "Paper" agrees with the word over the key in fig. 2.

Claim.—The circuit closer, in combination with the other parts, as substantially set forth for the purposes described.

No. 10,227.—Joseph D. Elliot, of Leicester, Mass.—*Improvement in Machines for Dressing Staves.*—Patented November 15th, 1853.



The nature of this invention relates more particularly to the use of a transversely inclined bed, upon which the staves are fed into the cutters, so as to adapt the machine to the cutting of thick or thin, tapering or wedge-shaped, riven staves, with the grain of the wood, without separately adjusting the machine, or assorting the staves. (See figures.) E is the cutter-wheel, to which motion is given by means of drum F; E dresses the concave side of the stave; G, weighted roller, and so situated as to hold the stave against the bed H, and against the lifting cut of the wheel; I, concave cylinder with straight knives arranged transversely across it, which dress the convex side of the stave. The weighted roller J holds the stave against the action of the under cutter K.

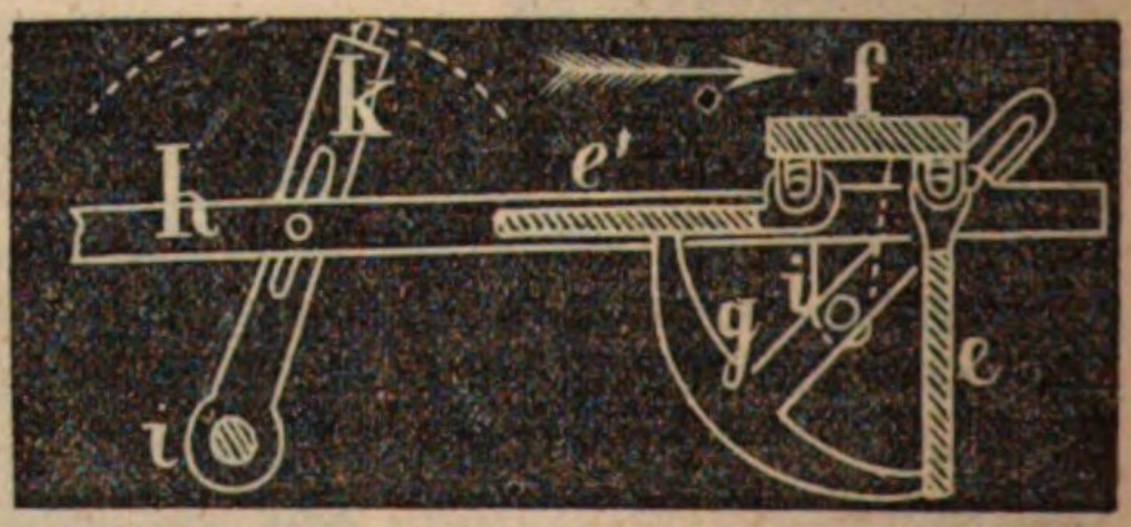
Claim.—The combination of the transversely inclined bed with the swivelled roller, for the purpose of adapting the machine to the dressing of riven staves with the grain of the wood, whether thick or thin, tapering or inclined from edge to edge, without any separate adjustment for the various sizes, substantially as described.

No. 10,228.—Franklin Fruit, of Jefferson City, Mo.—*Improvement in Machines for cutting Barrel-Heads.*—Patented November 15th, 1853.

The nature of this invention consists in holding the material of which the barrel-head is cut by means of a chuck, having a series of centres placed in circular form, and concentric with the periphery of the chuck. Each centre is provided with a spiral spring, which enables the centres individually to give or yield, so that the different pieces forming the barrel-head may vary in thickness and still be firmly held by the chuck.

Claim.—The chuck, constructed of two circular disks connected by studs, and centres placed between the studs, the centres passing through both the front and back disks, and having collars upon them; each centre being provided with a spiral spring, which is placed between the collar and the inner side of the back disk, and by which springs each centre will yield or give independently of the others, so that the different pieces forming the barrel-head may vary in thickness, and still be properly adjusted and secured between the face-plate and the chuck.

No. 10,229.—Banford Gilbert, of Pittsburgh, Pa.—*Improvement in Propellers for Steamboats.*—Patented November 15th, 1853.

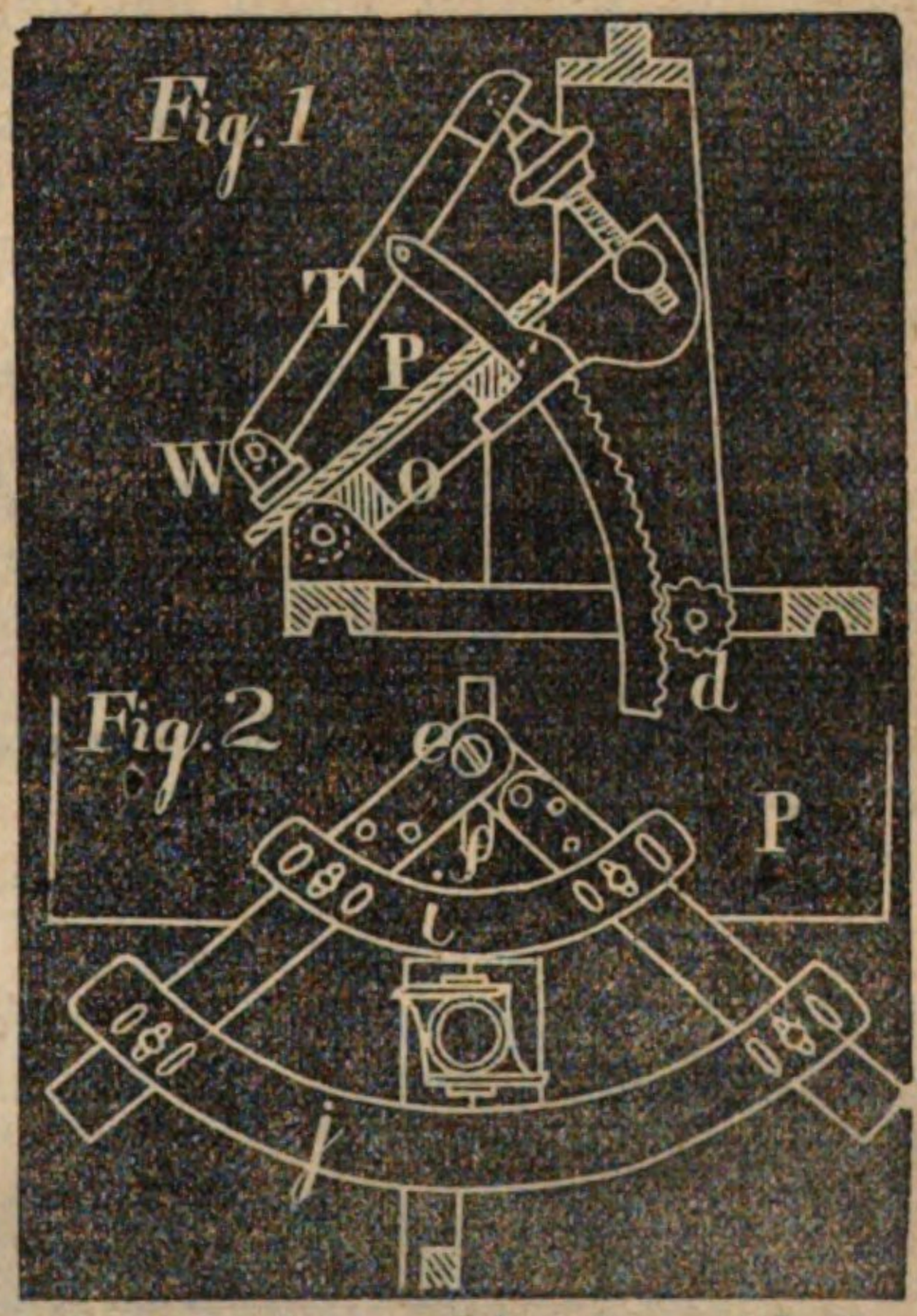


f is the cross-piece of the frame, to which the floats *e e'* are attached by hinges. The arm *k* turns round *i*, and thereby transmits a horizontal reciprocating motion to rod *h*, which is pivoted to one of the anchors *g*, which are made to swing round the centre pivot *i*, and thereby alternately turn one of the floats round its hinge.

Claim.—The combination of the anchors *g* with the double floats or paddles *e e'*, suspended so as to hang vertically in the water when in use, and operating with a horizontal reciprocating motion; one of the floats in each set propelling the boat in one direction, and the other float in each set propelling it in the opposite direction; one anchor being combined with each set of double floats, for the purpose of retaining one float in a horizontal position, so as to pass through the water with the least possible resistance when not in use, and sustaining the pressure of the water against the paddle in use, when in the vertical position which the anchor compels it to retain while propelling the boat, and leaving it free to assume the angle of least resistance while

returning through the water. The simultaneous reversing of the double paddles being accomplished by means of a handle which shifts the connecting-rod, to which all the anchors in one frame are attached, in the manner described.

No. 10,230.—LEONARD GILSON, of Brighton, Mass.—*Improvement in Machines for Dressing Circular Sash, &c.*—Patented November 15th, 1853.

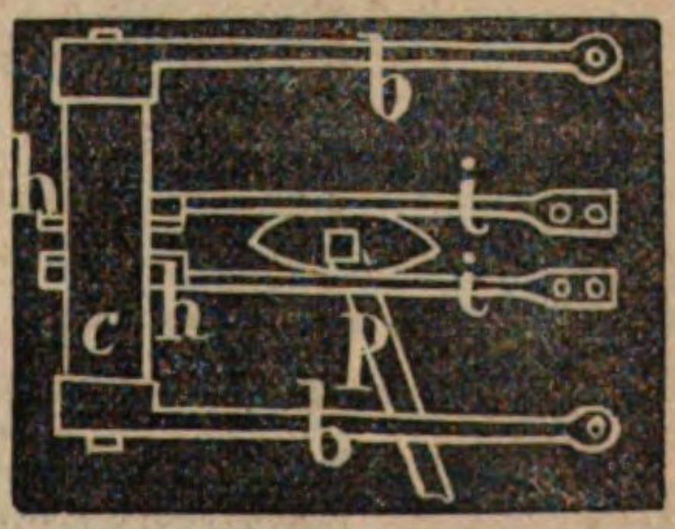


By means of the wheel *d* and the rack, the bed-frame o may be adjusted to an inclined position. The lever T can be made to press against the material to be planed at W, by screwing Y, which will raise the upper end of the lever T.

When circular work is required to be made, the carriage is placed in the centre of the frame o, and secured there, the bed is turned down at right angles with the cutters, and the levers T T are removed, and an angle-frame is placed upon the bed-plate, as shown in Fig. 2.

Claim.—The swing bed-frame, and adjustable bed-plate, in combination with the lever T, clamps W, and set-screws Y. Also, an angle-frame, with a joint at or near the vertex, to increase or diminish the angle, with a movable segment-plate thereon, in combination with the bed-plate and cutter, for circular work, as herein described.

No. 10,231.—DANIEL H. HOVEY, of Kilborn, Ohio.—*Improved Machine for Creasing Straps of Leather, &c.*—Patented November 15th, 1853.



The operation of this invention is as follows, viz.: (See fig.) *h h* are the creasers, which are pressed together by springs *i i*. The leather is placed between said creasers; and the roller, which has its bearings in springs *b b*, is brought down upon it by depressing a lever with the foot of the operator. The strap is then drawn through the machine. The creasers will adjust themselves to the various widths of straps by means of the springs *i i*.

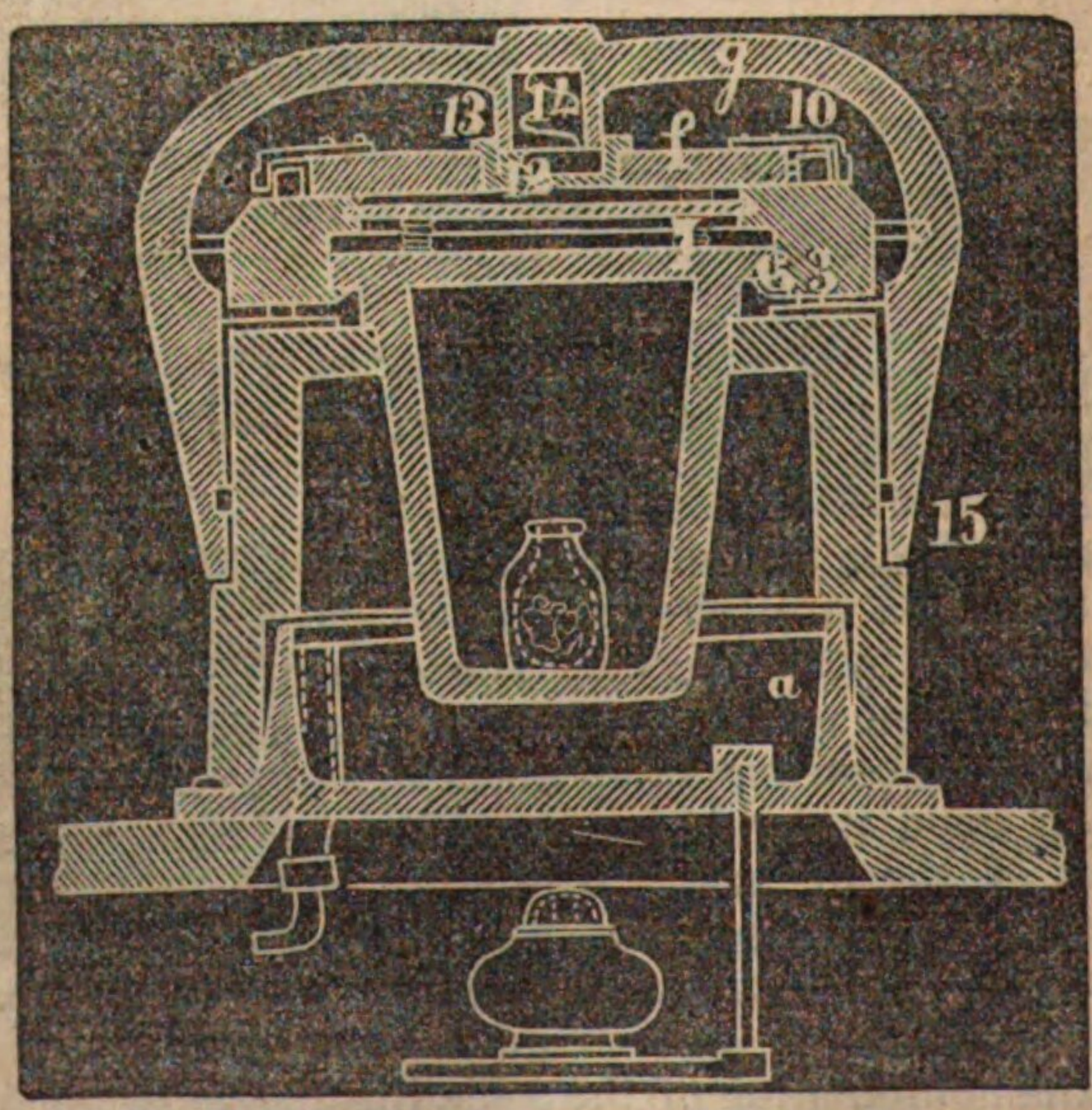
Claim.—The combination of the self-adjusting creasers *h h*, springs *i i*, vibrating cam *m*, and pressure-roller *c*, arranged and operating as described.

No. 10,232.—Joseph Leeds, of Philadelphia, Pa.—*Improvements in Ventilators.*—Patented November 15th, 1853.

The nature of this invention consists in arranging a series of downwardly inclined curved openings in the outer case or shell of the ventilator, for taking in and directing downward into the building to be ventilated a current or currents of pure air; and in connecting therewith a passage in the centre of the ventilator, through which the impure air may be drawn upwards by an accumulated or increased draft over the top of the passage; also in the manner of increasing the draft across the top of the ventilator, to aid the upward current of air through the centre passage.

Claim.—The combination in one case or shell of the series of downwardly inclined curved openings in the outer shell, for taking in and directing downwards a column of pure air, with the centre pipe or opening crowned with the two frustums of cones with their apices towards each other, for producing a counter-current, and carrying from the apartments to be ventilated the impure air, and increasing the ejecting current, the whole requiring but a single opening in the roof.

No. 10,233.—William Lewis and William H. Lewis, of New York, N. Y.—*Improved Apparatus for Chemically preparing Surfaces for the Daguerreotype, or similar Processes.*—Patented November 15th. 1853.



This improvement consists, first, in means to apply either heat or cold to the chemical, to regulate the evaporation thereof as required,

and according to the state of the weather; the chemical in summer-time evaporating too quickly, while in winter it is too slow in its operation. Second, in fitting the glass pot containing the chemicals, so that it is less liable to break. Third, in providing the slide carrying the daguerreotype plate to be coated. Fourth, in fitting the cap or cover with rollers to obviate friction. Fifth, in the means for securing to the slide and adjusting the plate of glass that sets over the pot containing the chemicals. Sixth, in the means of attaching the yoke that passes over the slide, to keep it down to the box.

Claim.—The metallic base formed as a box *a*, to which cold water or heat is to be applied, to regulate the temperature of the chemicals in the coating-box. Also, suspending the glass pot within the coating box by means of a flanch or bead on the upper edge thereof. Also, the rollers 3 in combination with the ways *d*, formed with the inclines to relieve the friction. Also, the rollers 10 on the cover *f*, combined with the ways and inclines 11 on the slide, to lift the cover and relieve friction. Also, the rebates 6 to support the glass on the lower surface thereof, in combination with the screws 7 to retain the same against the rebates. Also, securing the metal yoke *g* in place by means of ribs 16 on the inner sides of the vertical parts thereof, and the slides 15. Also, the hub 13, on the yoke taking the socket 12, in the cover *f*, and containing the spring 14, whereby the cover is retained in place, but allowed to take its proper bearing.

No. 10,234.—Sergius P. Lyon, of Farmington, Mich.—*Improvement in the Method of Constructing Stove-Dampers.*—Patented November 15th, 1853.

(The claim explains this improvement by reference to the annexed figure.)

Claim.—The arrangement of the lever H, having the valve D on its lower end, and a curved portion G and flat spring E on its upper end, in combination with the lever A, pivoted between the curve-portion and spring (said lever attached to the upper valve *c*), the thumb-screw N, and expansible plate M; the whole acting automatically in the regulation of the draft of air to the fire, and also to the induction of air to the flue.

No. 10,235.—William H. Muntz, of Norton, Mass.—*Improvement in Paddle-wheels for Vessels.*—Patented Nov. 15th, 1853.

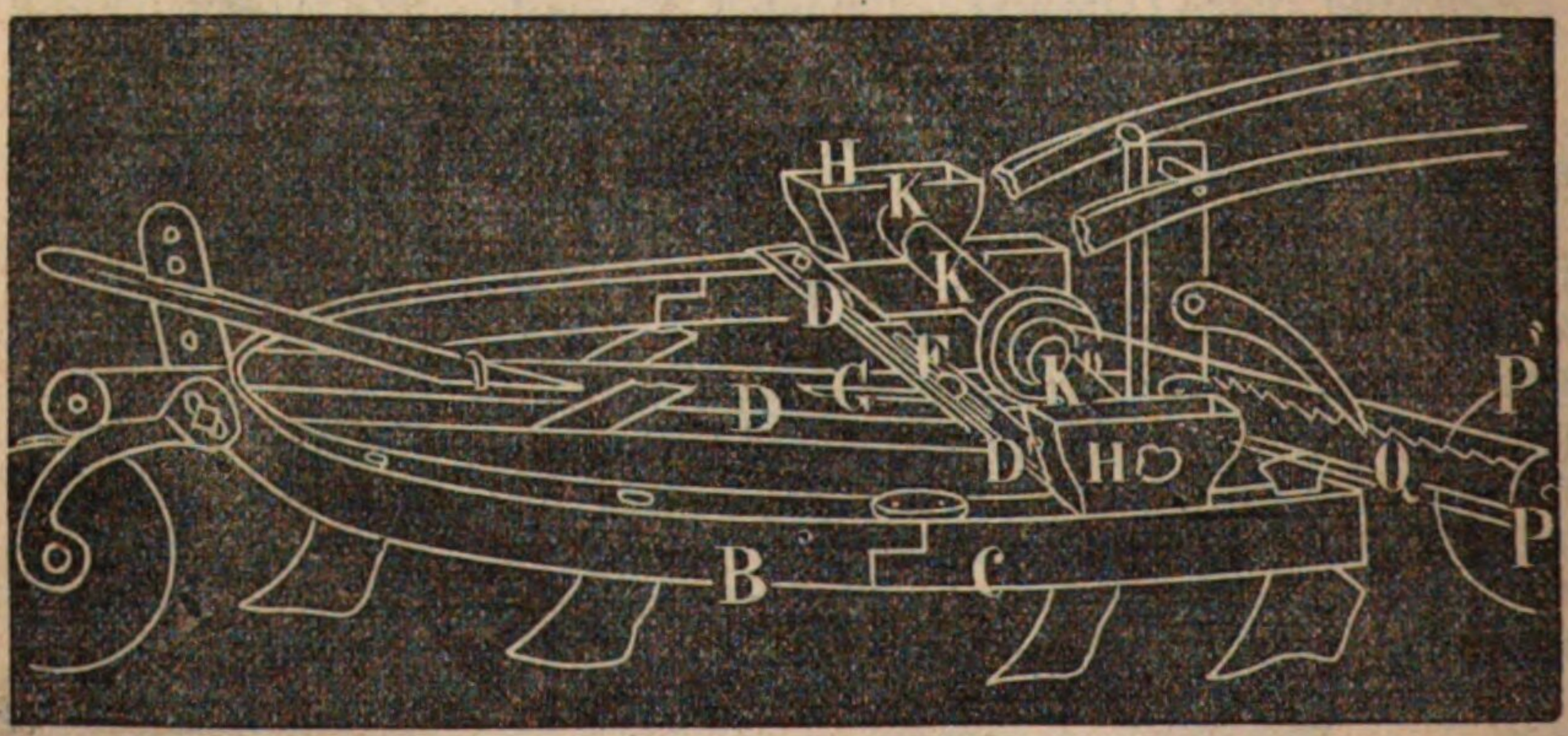
This improved wheel is constructed of three circular wheels (with a shaft passing through their centres) placed at equal distances apart. A B C are the wheels; D′, the shaft. The centre wheel is about twice the diameter of the others. To these wheels the buckets are affixed; one set of them being made to extend from the inner part of one wheel A to that of the other wheel B, while the other set

are made to extend from the circumference of the wheel C to that of the wheel B.

The buckets are formed of sheet-metal, in the following manner, viz.: First, the bucket is bent so that one part *a* shall stand at about a right angle to the other part *b*. The part *a* is properly the paddle or float, and *b* the guard. These parts are each curved in a peculiar manner. The float strikes the water flatwise, but enters the water at an angle of about forty degrees to the horizontal, so that its narrowest part shall not only enter the water first, but shall be the first part of the float to leave the water.

Claim.—The mode of making the paddle-wheel, consisting in making the supports of the buckets a cutwater-wheel, and two wheels A C of smaller diameter; of forming each bucket of a float and guard, made to stand at an angle to each other; of making the guard to extend from the rim of the cutwater-wheel to the other or smaller wheel, and so that the guard shall not only pass edgewise through the water, but endwise into the water, the float being made to project inwards from the guard.

No. 10,236.—GEORGE PHILLIPS, Philadelphia, Pa.—*Improvement in Cultivators and Seed-Planters.*—Patented Nov. 15th, 1853.

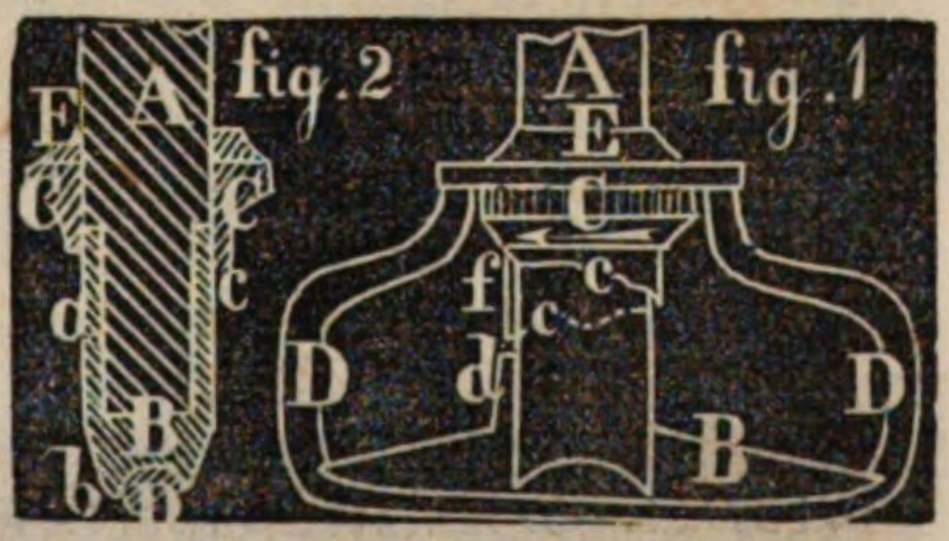


The nature of this improvement consists in so constructing and combining the several parts of the planter, harrow, and cultivator-plough, as to enable them to be separated or attached, and to perform either of the functions for which they are designed in a more effective manner than heretofore; and also in attaching to the upright post, at the back part of the centre or draught beam, a graduating and driving wheel capable of being used for those purposes, or as a pivot-wheel to turn the machine on, when it is desired to do so for any purpose. (See figure.) D′ D″ slotted bars secured by the nut-screw F passing

through both the slots, and also through the slot of the centre-beam D; H, the hoppers; K, projecting tubes with suitable holes for dropping the grain; P, the band-wheel, which is made to revolve the hollow shafts K′ K″.

Claim.—The arrangement and combination of the side pieces B and C, slotted beam D, and slotted bars D′ D″, and the hollow sectional axle or shaft K, K′, and K″, for the purpose of allowing the expansion and contraction of the side pieces. Also, attaching the driving and graduating wheel to the back part of the machine by means of notched bars Q, secured to the upright post of the centre or draught beam by a bolt upon which they move, and suspending above the same pawls, which enter the notches, thus enabling the wheel to perform its functions of regulating the height of the back part of the machine, and driving the distributing-shafts, and to be drawn or thrown under the centre or draught beam, to form a pivot-wheel, upon which the machine can be raised from the ground and turned, in the manner and for the purpose specified.

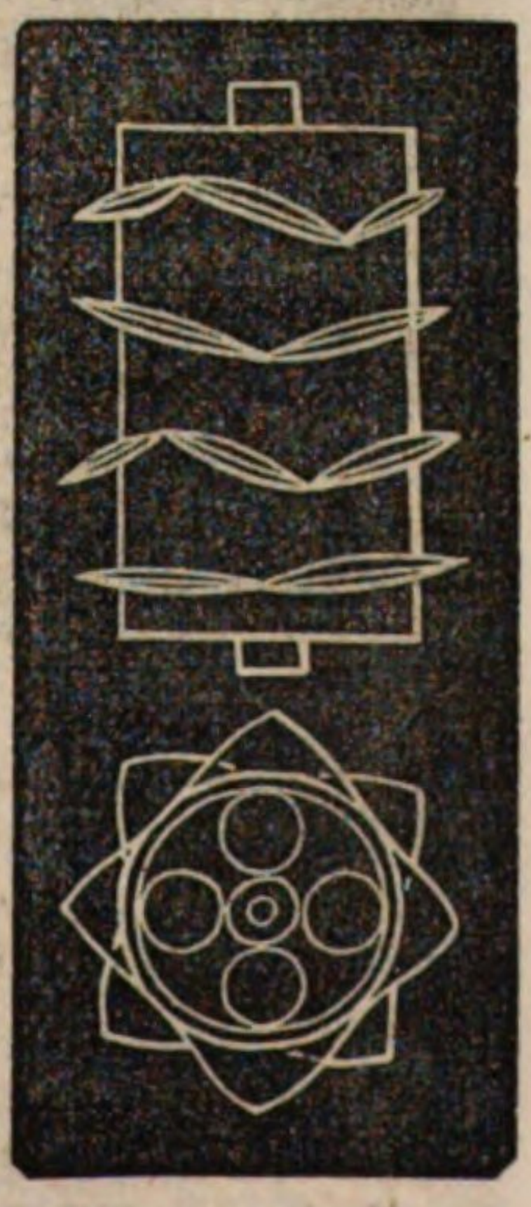
No. 10,237.—Timothy Randlett, of Enfield N. H.—*Improvement in Mop-Heads.*—Patented November 15th, 1853.



This improvement is explained in the claim of the inventor, by reference to the annexed figure.

Claim.—The binder D, and revolving tightener C, combined with and embracing the united cross-head B, the socket *a*, and ridge *d*.

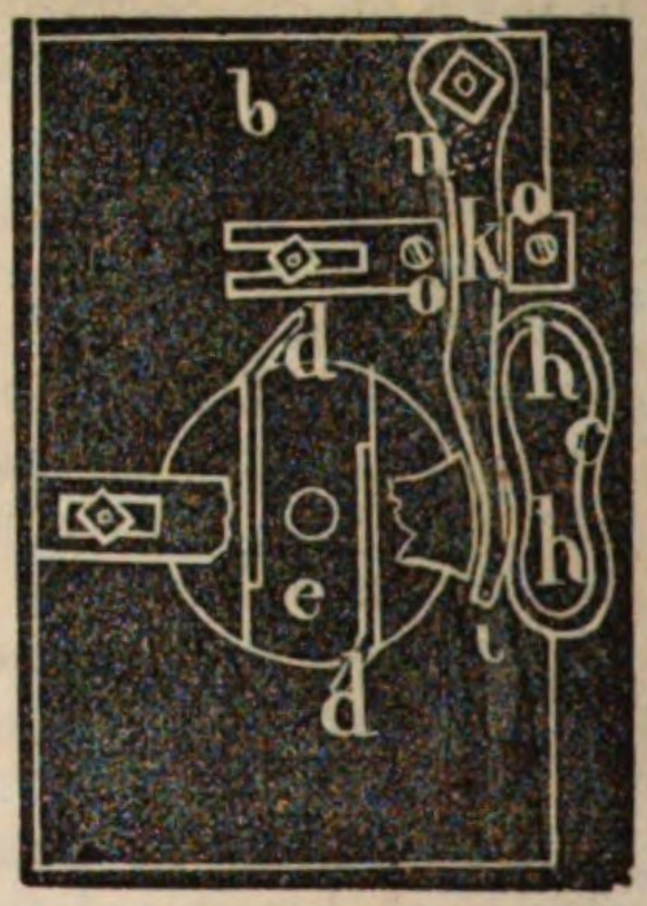
No. 10,238.—Robert Sinclair, Jr., and Richard F. Maynard, of Baltimore, Md.—*Improvement in Straw-Cutters.*—Patented Nov. 15th, 1853.



This invention relates to means for feeding the straw-cutter, and consists in the employment on the feeding-roller, of alternate right and left fins, so arranged as to form a double spiral or screw, for the purpose of feeding forward the straw, preventing it from crowding to the right or left of the box, and compressing it as it is passed to the knives.

Claim.—The employment of alternate right and left fins, so arranged as to form a double spiral or screw, the fins operating together for the purpose set forth,—and constituting, all together, what the inventors denominate, "the double screw propeller" for straw-cutters.

No. 10,239.—JOHN H. THOMPSON, JAMES M. THOMPSON, and HOSEA Q. THOMPSON, of Holderness, N. H.—*Improved Machine for Trimming the Soles of Boots and Shoes.*—Patented Nov. 15th, 1853.



(See figure.) *b* is the platform; upon its edge rests the sole *c*; *d d* are the knives set in the revolving knife-stock *e*; *h h*, the pattern-plate, which is first fastened to the sole; *k* is the gauge-bar; *o o*, guides.

Claim.—A machine in which the sole is trimmed by revolving knives, and guided as fed along by the operator, by an adjustable gauge-bar, against which the edge of the pattern-plate abuts.

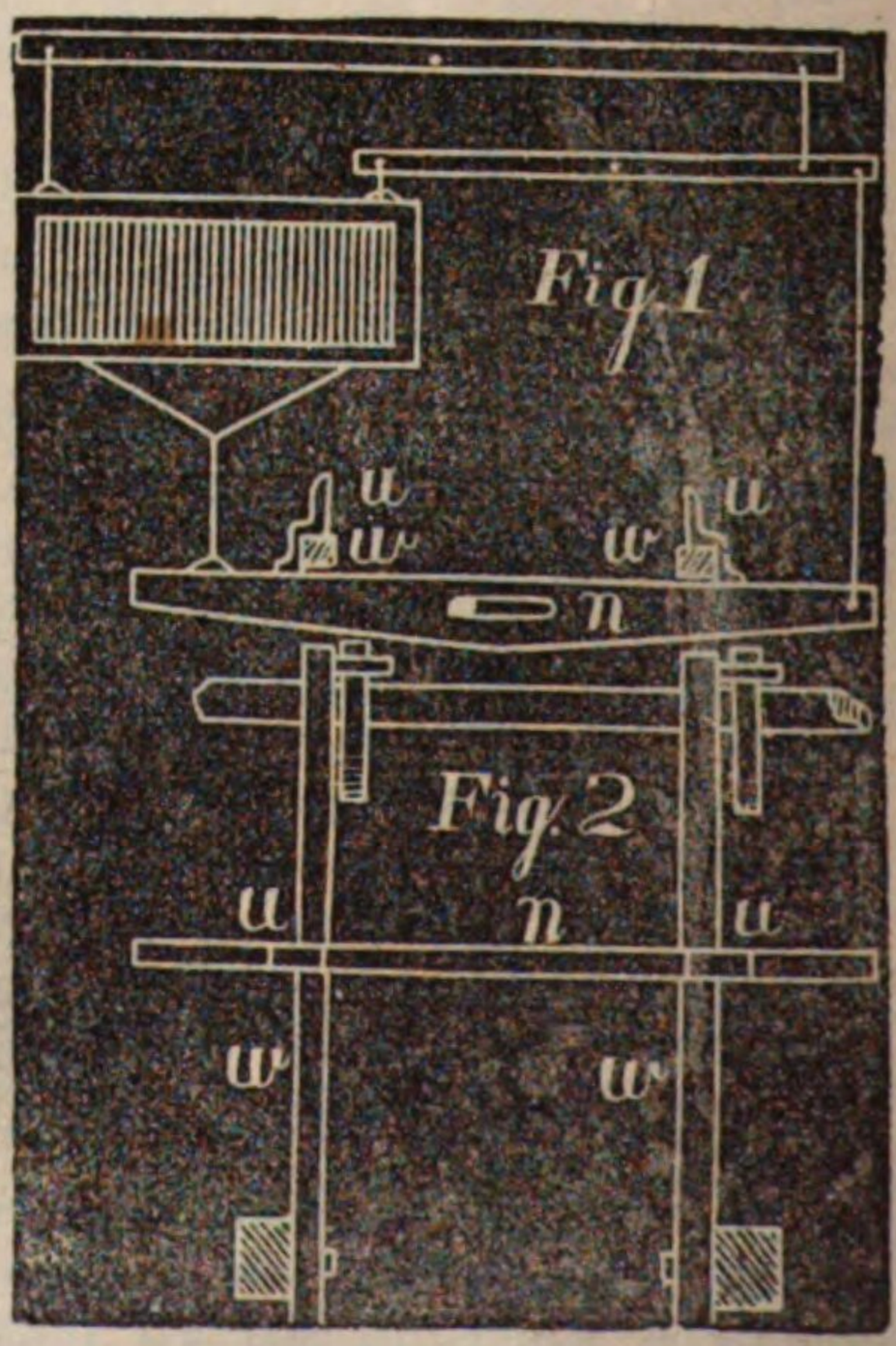
No. 10,240.—WILLIAM H. TOWERS, of Philadelphia, Pa.—*Improved Attachment to Registers of "Hot-air Furnaces."*—Patented Nov. 15th, 1853.

The nature of this invention consists in placing on or about the register a convenient contrivance to hold water to be evaporated in the apartment into which the register conducts the heated air, by which means the moisture of the air of each apartment may be regulated to suit the occupants.

Claim.—Placing within the jambs of each register the means of moistening the heated air.

No. 10,241.—WILLIAM TOWNSHEND, of Hinsdale, Mass.—*Improvement in Looms.*—Patented Nov. 15th, 1853.

The nature of this invention consists in the use of levers, connected to the heddles, and so set on slotted fulcrums, that they receive an endwise-motion from the pattern-chain, or similar means, to connect said levers, near one end or the other, with cross-levers, to be carried up by such levers, and either elevate or depress the heddles, according to which end of said sliding-lever is elevated.



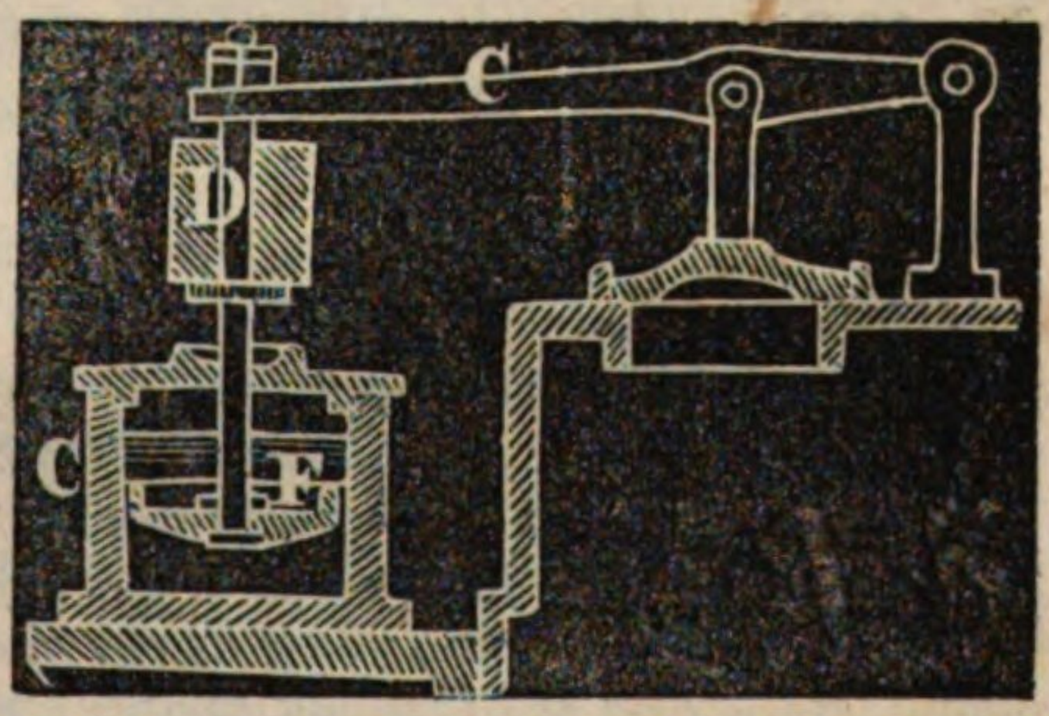
Claim.—The levers *n*, on a slotted fulcrum, with their latch-pieces *u* and *v*, or their equivalents, combined with the levers *w* and *w* 1; by which arrangement, the levers *n* are connected to either lever, *w* or *w* 1, by means of the end-motion, and carried up and down by competent power applied to the levers *w* and *w* 1.

No. 10,242.—JONATHAN E. WARNER, of Boston, Mass.—*Improvement in Machine for Finishing the ends of Staves.*—Patented Nov. 15th, 1853.

The object of this invention is to finish the two ends of a stave simultaneously, which includes the distinct operations of cutting the staves to the proper length, bevelling the ends, reducing to the required thickness, and cutting the groove, within which the edges of the head are to rest, or "crozing." These four combined operations are technically known as "working off," and are usually performed after the cask is "set up," and by hand-labor.

Claim.—A feed-bed revolving in bearings, which are capable of being moved by weights, springs, or other means towards the beds or stops on which the back or outer side of the stave is supported; the extent of such movement depending upon the thickness of the staves operated on. Also the combination of the feed-bed with the saws, cutters, fixed stops, and movable frame, and their equivalents, for the purpose and in the manner above described.

No. 10,243.—HENRY WATERMAN, of the City of Hudson, N. Y.—*Improvement in the Mode of Constructing Safety-Valves.*—Patented Nov. 15th, 1853.



This improvement relates to locomotive engines, and is designed to obviate the uncertainty with which the weighted lever indicates the pressure of steam (on account of the sudden upward and downward motion of the locomotive), and to prevent the escape of steam unnecessarily; and consists in the application of weighted rod D (see fig.) to the outer end of the lever C, which is connected to the valve F, in the cylinder G, which cylinder is filled with sperm oil or other similar fluid nearly to its top, completely covering the piston. By this means the piston can move no faster than the fluid is made to pass by the piston, and consequently all sudden vibrations of the weighted lever will be checked.

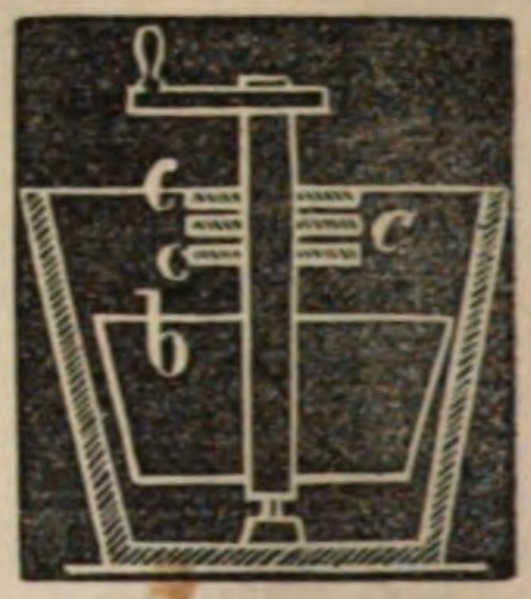
Claim.—The piston F, attached to the weighted end of the valve-lever within the cylinder G, and immersed in the liquid in the cylinder, combined and operated for the purpose and in the manner herein set forth.

No. 10,244.—JONATHAN WHITE, of Antrim, N. H.—*Improvement in Shovels.*—Patented Nov. 15th, 1853.

This improved shovel has a cast-steel blade, with iron straps to receive the handle *welded* to it, instead of being riveted as heretofore.

Claim.—The uniting, by welding, of the iron handle-straps to the sheet cast-steel blade.

No. 10,245.—Hosea H. Grover, of North Cohocton, N. Y.—*Improvement in Churns.*—Patented Nov. 15th, 1853.



(See fig.) This churn is in the form of a flaring tub: *b*, the dasher attached to the crank-shaft. The centrifugal motion of the milk causes it to rise up until it reaches the cross-pieces *c*, when it is thrown back upon the dasher.

Claim.—A churn consisting of a conical tub, furnished with a vertical revolving dasher at its bottom, combined with breakers at the top, in the manner and for the purpose set forth.

No. 10,246.—Evan H. Branson, of Fredericksburg, Va.—*Improved Mode of Planing Crooked Timber.*—Patented Nov. 15th, 1853.

The nature of this invention consists in supporting the arbor of one of two pulleys, carrying an endless belt of knives, upon elastic bearings.

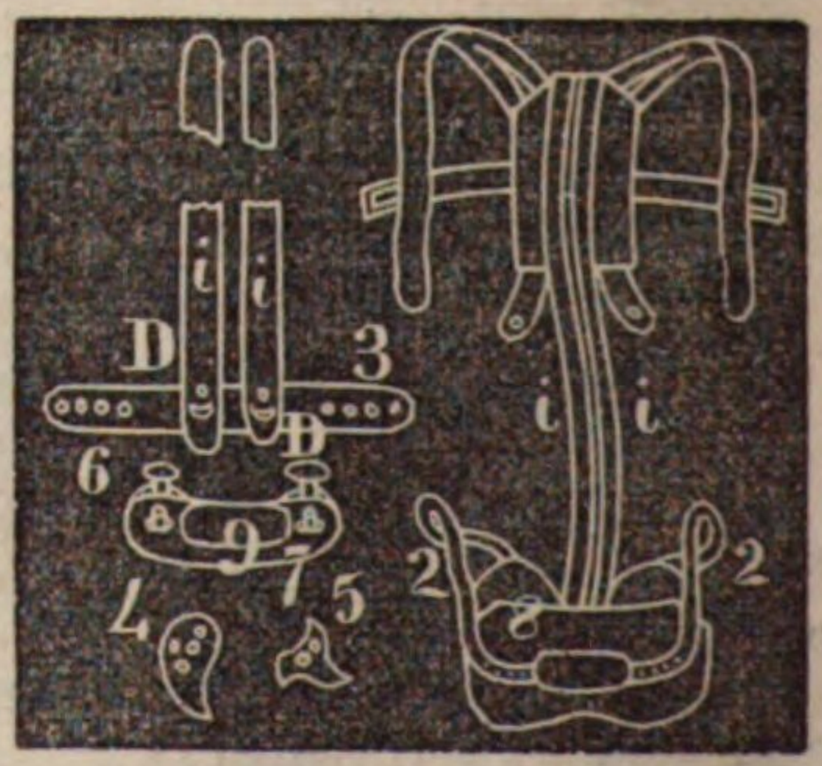
Claim.—Supporting the arbor of one of two pulleys, carrying an endless belt of knives, for dressing crooked timber, upon elastic bearings, for the purpose of yielding to any undue strain upon the knives.

No. 10,247.—William Beschke, of Alexandria, Va.—*Improved Mode of Joining and Riveting Metallic Plates.*—Patented November 22d, 1853.

The claim explains the nature of this improvement.

Claim.—The method of equally dividing the weakness resulting from the joining of iron, steel, or any other metallic plates; which is effected by putting the plates together so as to break joint at the ends, and riveting over these another similar set of plates, so as to break joint at the sides and ends with the first, thus entirely covering the joints of the first; the rivets over the surface being equi-distant from each other, and from those confining the edges.

No. 10,248.—Gardner S. Browne, of Hartford, Conn.—*Improvement in Body Braces.*—Patented November 22d, 1853.

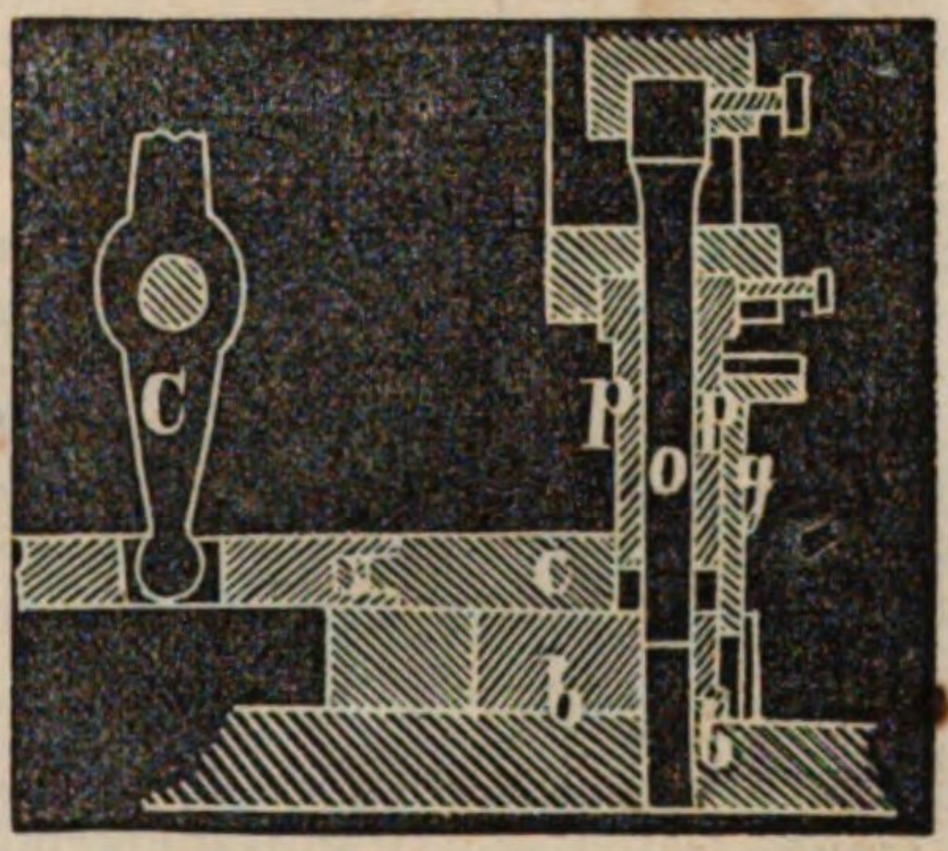


i i are the dorsal springs, with each a hole and a slot at D, into which fit screws and pivots. The pivots project from the sacral spring 3. The connection of the two springs allows a lateral motion to the dorsal springs, rendering the brace flexible and easy to the patient. 2 2 are the hip-springs; 4 4, the dorsal pads; 5 5, the star-plates, for uniting and holding the hip and sacral springs together; 6, the spring of the attachment 9, with two small knobs for depressing the springs at each end of the attachment.

Claim.—Uniting the shoulder and abdominal brace by pliable

springs *i i* so arranged and constructed that they shall be confined on each side of the spine to the abdominal brace, and when fastened at one end, permit a limited vibration, and when fastened to the other end, be rigid; whereby the same brace can be adapted to a variety of patients in different stages of disease, or to different stages of disease in the same patient.

No. 10,249.—Henry Carter and James Rees, of Pittsburgh, Pa.—*Improvement in Machines for Making Nuts.*—Patented November 22d, 1853.



These improvements refer to the die-box, and are illustrated in the accompanying drawing. The die consists of six blocks, corresponding to the sides of a nut. The die-blocks, *p* and b^2, have central apertures for the eye-punch *o* to work through. Block *p* is moved up and down, by means of a cam, to admit the blank, and reduce the end of the bar of metal to the proper thickness. The two side blocks are held against b^2 by means of set-screws. c is a cam-lever connected with the die-block *c* (back of the side blocks), for the purpose of discharging the finished nut, and moving back to receive another blank. The front die *g* rises and falls, corresponding with the movements of the back die-block. The front die-block carries a knife at its lower edge to sever the blank from the bar.

Claim.—The arrangement of the devices, substantially as herein described, for reducing the end of the blank bar to a given thickness, preparatory to severing the blank; whereby nuts of uniform thickness are produced from bars of irregular thickness, and the machine is protected against injurious strains.

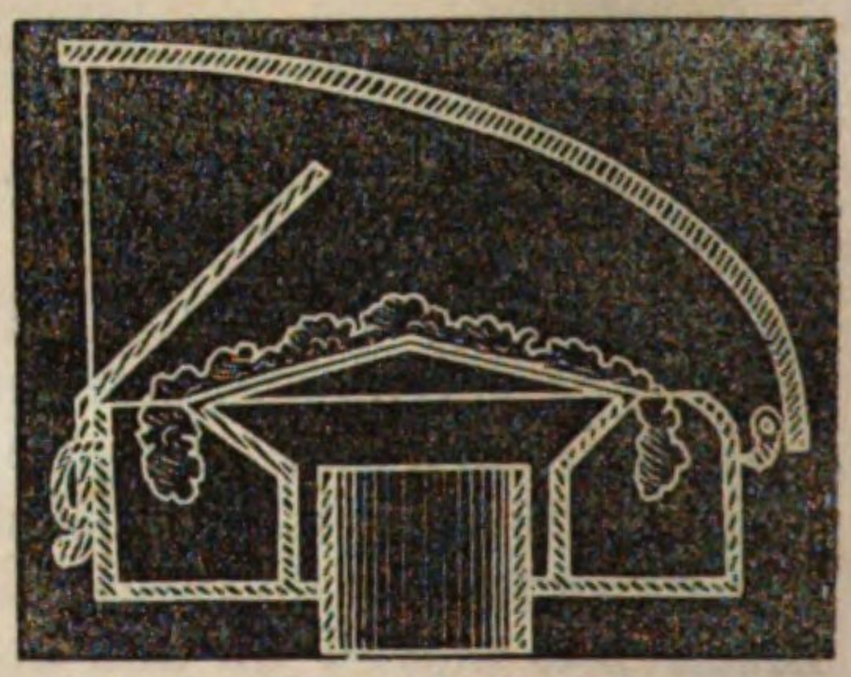
No. 10,250.—Thomas Champion and Samuel Champion, of Washington, D. C.—*Improvement in Transporting Bridges.*—Patented November 22d, 1853.

The bridge is built upon the ground near the stream over which it is to be placed. The abutments being erected, the bridge is moved upon trucks or rollers placed upon heavy plank, until its forward end projects over the first abutment. A vessel is then placed beneath the projecting end of the bridge, with a substantial frame upon its deck, upon which the bridge rests, and is carried forward. The vessel must first be ballasted with water, or other material; and as the bridge is gradually pushed forward towards the opposite side of the stream, the ballast must be removed to give proper buoyancy to the vessel, and enable it to carry the increasing weight of the bridge resting on the vessel at a suitable height to rest upon the opposite abutment. If the vessel is ballasted with water, it may be pumped out as required; or,

if other material be used as ballast, it can be removed to another vessel near by.

Claim.—The mode of operation as herein described, viz.: building bridges on shore, on a level, or thereabouts, with their resting-places on the abutments, and then setting them in place in the manner described.

No. 10,251.—Stillman A. Clemens, of Springfield, Mass.—*Improvement in Ventilators for Railroad-Cars.*—Patented Nov. 22d, 1853.



The nature of this invention consists in an air-filter, so made and arranged with other apparatus, as to be kept wet with water, and through which a current of air is directed into the car or other apartment to which the apparatus is attached. The air-filter may be made of sponge or felt, or any porous or fibrous material sufficiently porous to absorb water by capillary attraction, and at the same time admit the passage of a current of air through it when wet. (See figure.)

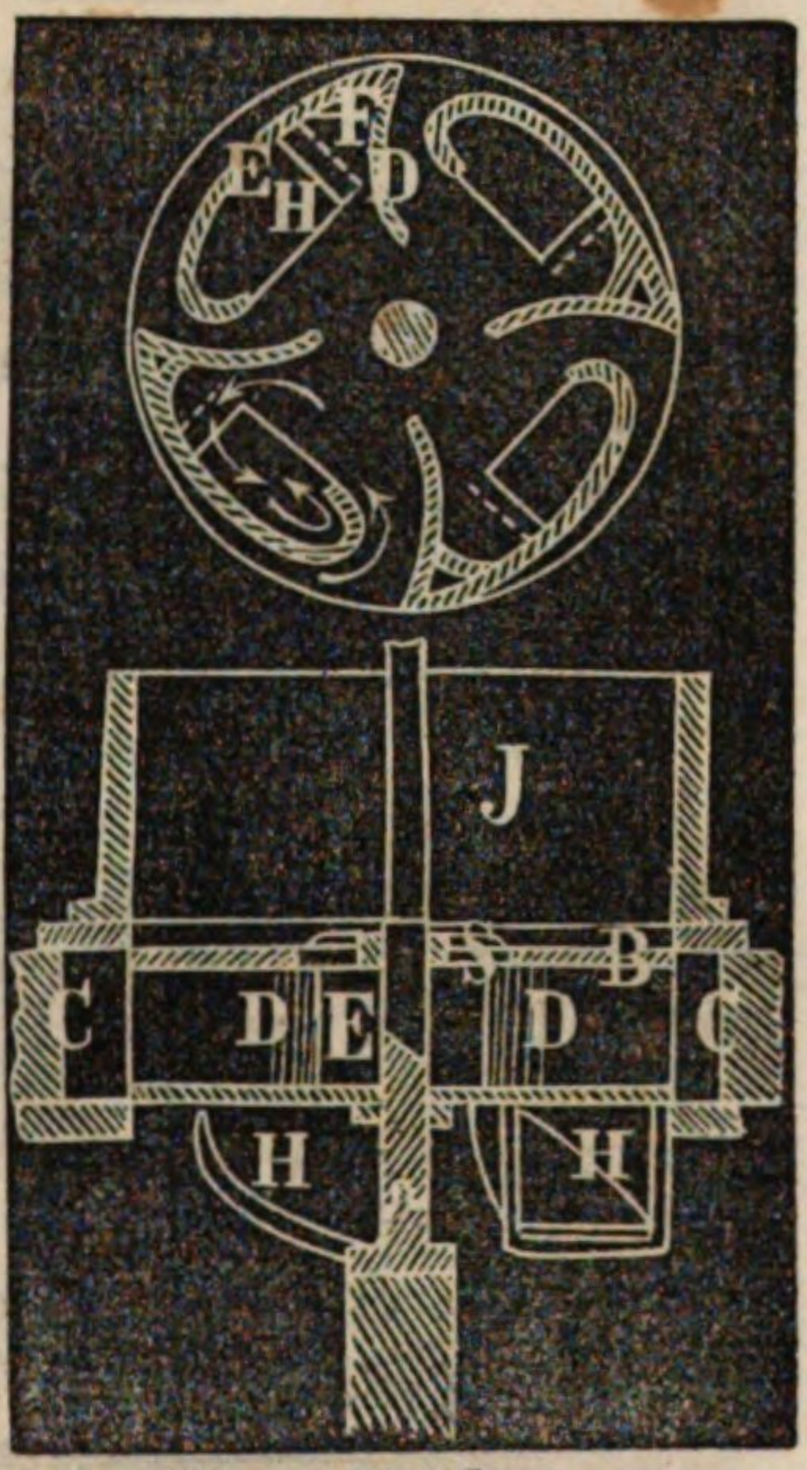
Claim.—The mode of ventilating railroad cars, etc., by causing the air to pass through sponge, or other suitable porous or fibrous substance or material; said material being provided with means for a continual supply of water to moisten it, and replace that which is evaporated by the air which passes through it.

No. 10,252.—Oliver A. Kelly, of Woonsocket, R. I.—*Improvement in Looms.*—Patented November 22d, 1853.

Claim.—The arrangement of levers (as described in specification), connected by a spring or elastic connecting-rod, in combination with the tappet-wheel, whereby the shuttle-boxes are raised and lowered by a yielding mechanism, which diminishes greatly the liability to breakage. Also, the method of balancing the shuttle-boxes on the lay, in combination with mechanism for simultaneously raising one set and depressing the other. Also, the reciprocating and rotating pattern-cylinder, in combination with the vibrating lever, or the equivalent thereof, for the purpose of rendering the intervals between the changes of the shuttles regular or irregular. Also, the rack-cylinder, or the equivalent thereof, in combination with the two pinions, and the mechanism for throwing them alternately into or out of gear, or the equivalent thereof, whereby the racks are moved in alternately opposite directions, with a variable range of motion, as required for operating the pattern-cylinder. Also, a series of pins, or the equivalent thereof, on the inner end of the rows of holes in the pattern-cylinder, a disk having a corresponding number of pins or teeth on its periphery, placed loosely on the axis of the rack-cylinder and the pawls, which turn the disk and pins, in combination with the rack-cylinder, whereby the latter is turned at each extreme of its vibration, so as to throw one pinion out of gear with the racks, and the other in, to reverse the mo-

tion. Also, the method of uniting the pattern-cylinder, or its equivalent, with the rack-cylinder, or its equivalent, by a yielding or slip coupling, whereby the danger of breaking the mechanism, when it happens to become deranged, is greatly lessened. Also, the method of working the same row of holes in the pattern-cylinder to the right and left in succession, in case the cylinder should not have holes enough to work the ornamental design in the cloth, by working the holes once only; whereby a cylinder of a given size will be capable of producing a much more elaborate design, or larger figure, than if the holes could be used but once in the production of the same figure.

No. 10,253.—FREDERICK SMITH, of Pontiac, N. Y.—*Improvement in Water-wheels.*—Patented November 22d, 1853.



This improvement consists in a series of buckets D (see fig.) so arranged as to produce a twofold direct action, combined with a twofold reaction of the water upon the wheel; and in a new method of ventilating the wheel, by which a powerful draft of air is secured through the wheel, which draft acts in conjunction with the water passing down on the lower buckets, and supplies the vacuum induced in the wheel by the centrifugal force and discharge of the water, and also helps produce the curved current of the water as it passes from the upper to the lower buckets of the wheel. J is the air-tube.

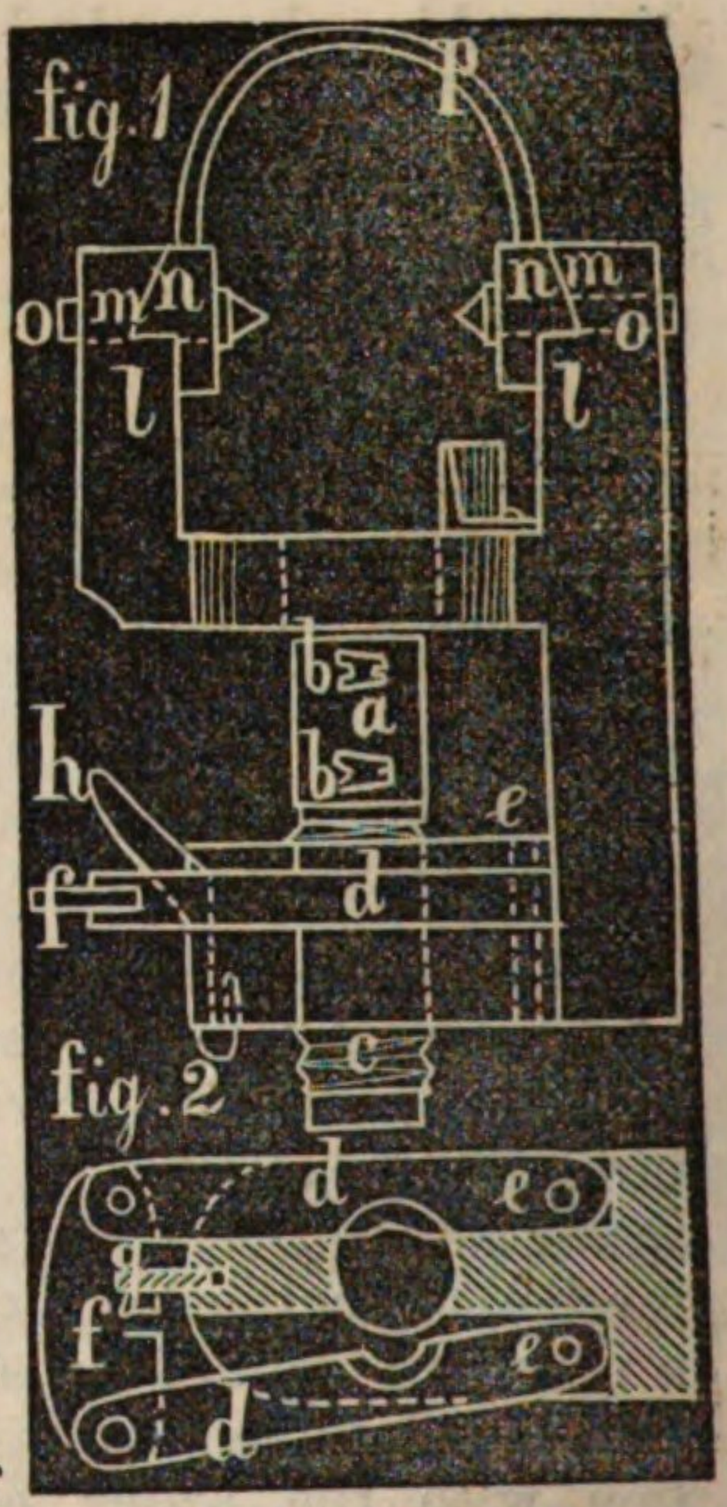
Claim.—The ventilating water-wheels, inclosed by a curb, scroll, or box, by means of a tube communicating with the wheel, or in any other manner substantially the same, in combination with the buckets H, D, E, and F, constructed and arranged in the manner and for the purpose herein set forth.

No. 10,254.—JAMES R. KAIN, of Tiffin City, Ohio.—*Improved Apparatus for Cutting Screws on Bedsteads.*—Patented Nov. 22d, 1853.

This improvement consists in the method of securing the rail in the machine, by means of spiral-faced plates, with points on their inner faces, attached to and movable by a spring-lever, the arrangements being such that the securing points advance simultaneously an equal distance on each side of the rail. Also, in the method of changing the right and left nuts, and keeping them in position by means of a spring-catch and notched tie-piece, which holds firmly the required nut against the screw. The reversible cylinder *a* (see figures) carrying the cutters *b b* sits upon the head of the double-threaded screw *c*, the nuts *d d* of which are movable about pins *e e*,

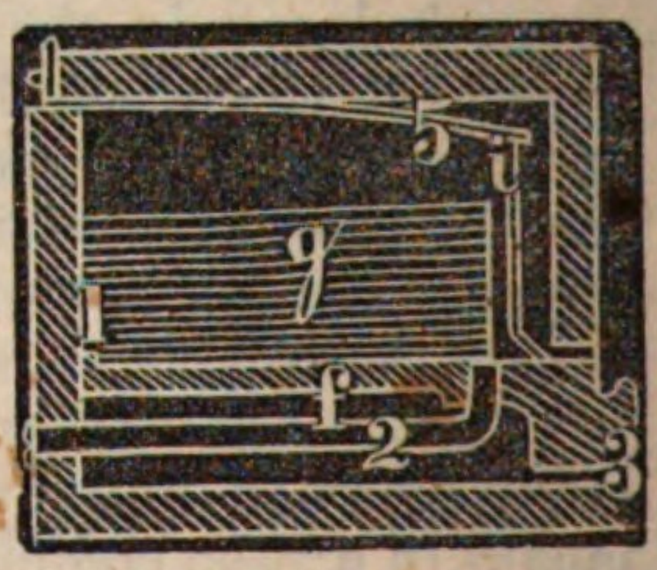
and are held together by tie *f*, having on its under edge the notches *g g*, by which the spring-catch *h* holds either of the nuts against the screw *c*. *l l*, horizontal arms; *m m*, spirals; *n n*, screw-plates; *p*, the spring which keeps the plates *n n* in place.

Claim.—The combination of the spiral-faced plates *n n'*, with the arms *l l'* and spring *p*, for securing the rail in the machine, as specified. Also, the catch *h*, in combination with the notched tie *f* and pins *e e*, for carrying the right and left nuts against the screw, and securing them in position.



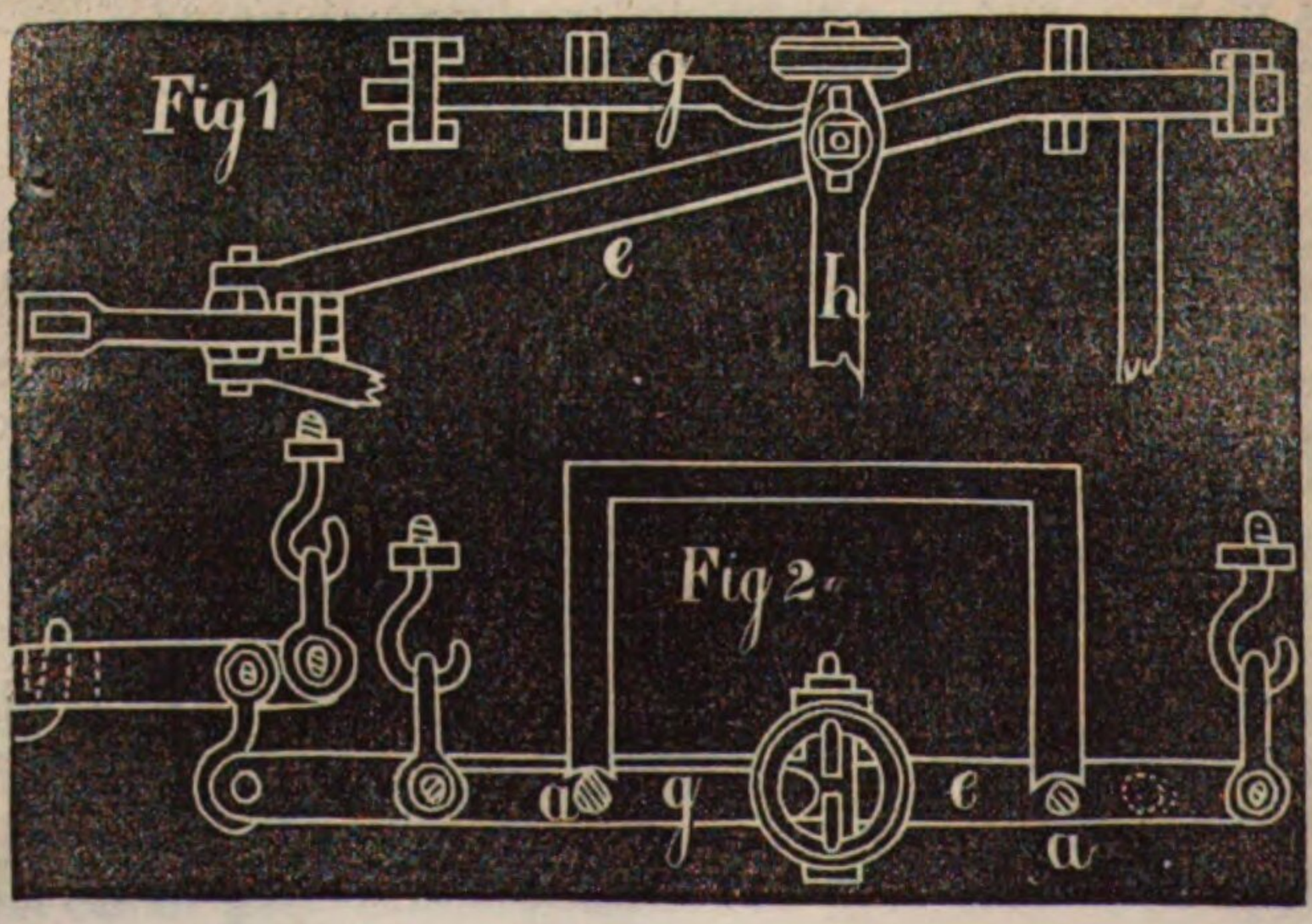
No. 10,255.—WILLIAM LEWIS and WILLIAM H. LEWIS, of New York, N. Y.—*Improved Method of Supplying Business Cards, &c.*—Patented November 22d, 1853.

The object of this invention is to furnish means whereby any person can take from a case or box one card at a time, and no more, for the purpose of business, as the address of parties, or for memoranda. (See figure.) By pulling the knob 3, the lip *i* will draw out the lowest card of the pack *g*; the gate *i*, by means of spring 5, will prevent more than one card passing at a time beneath it. The india-rubber spring 2 will draw the slide *f*, to which the knob 3 is attached, back to its first position.



Claim.—The lip 1 on the slide *f*, combined with the gate *i*, to draw out one card at a time.

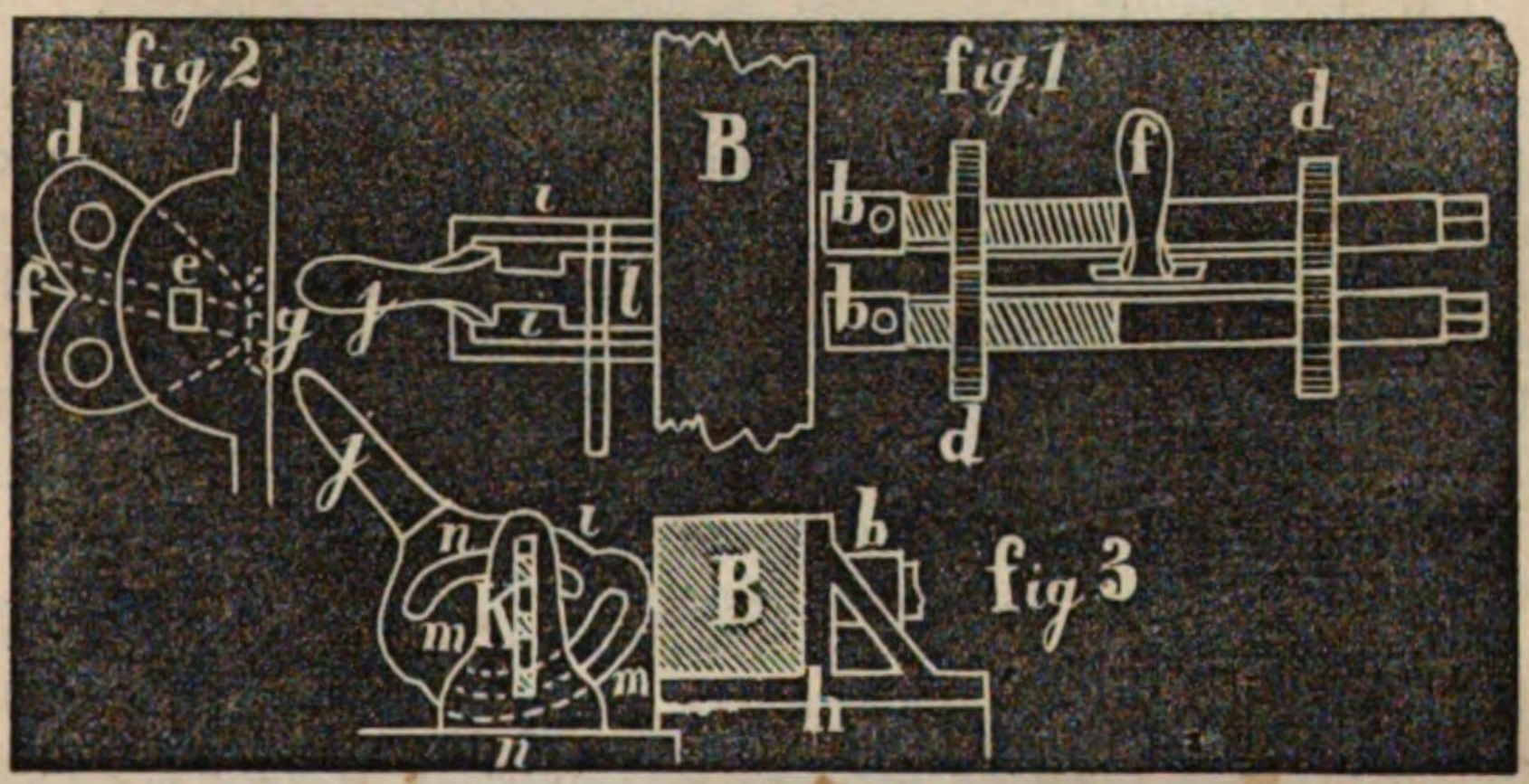
No. 10,256.—SAMUEL T. MCDOUGAL, of New York, N. Y.—*Improvement in Platform and other Scales.*—Patented Nov. 22d, 1853.



This improvement consists chiefly in the addition of the forward lever, and its connection with the principal lever.

Claim.—The arrangement of the triangular lever E and the two independent side-levers G, having their long arms suspended from knife-edges attached to the lever E; whereby the final adjustment necessary to make the scale give the same weight on all parts of the platform may be made by moving the bar H only, which carries the two last-named knife-edges, without the necessity of any precise adjustment of the two knife-edges A upon the levers G to equal distances from the fulcra of those two levers.

No. 10,257.—J. PARSONS OWEN, of Norwalk, Ohio.—*Improvement in Machines for Cutting Screws for Bedsteads.*—Patented November 22d, 1853.

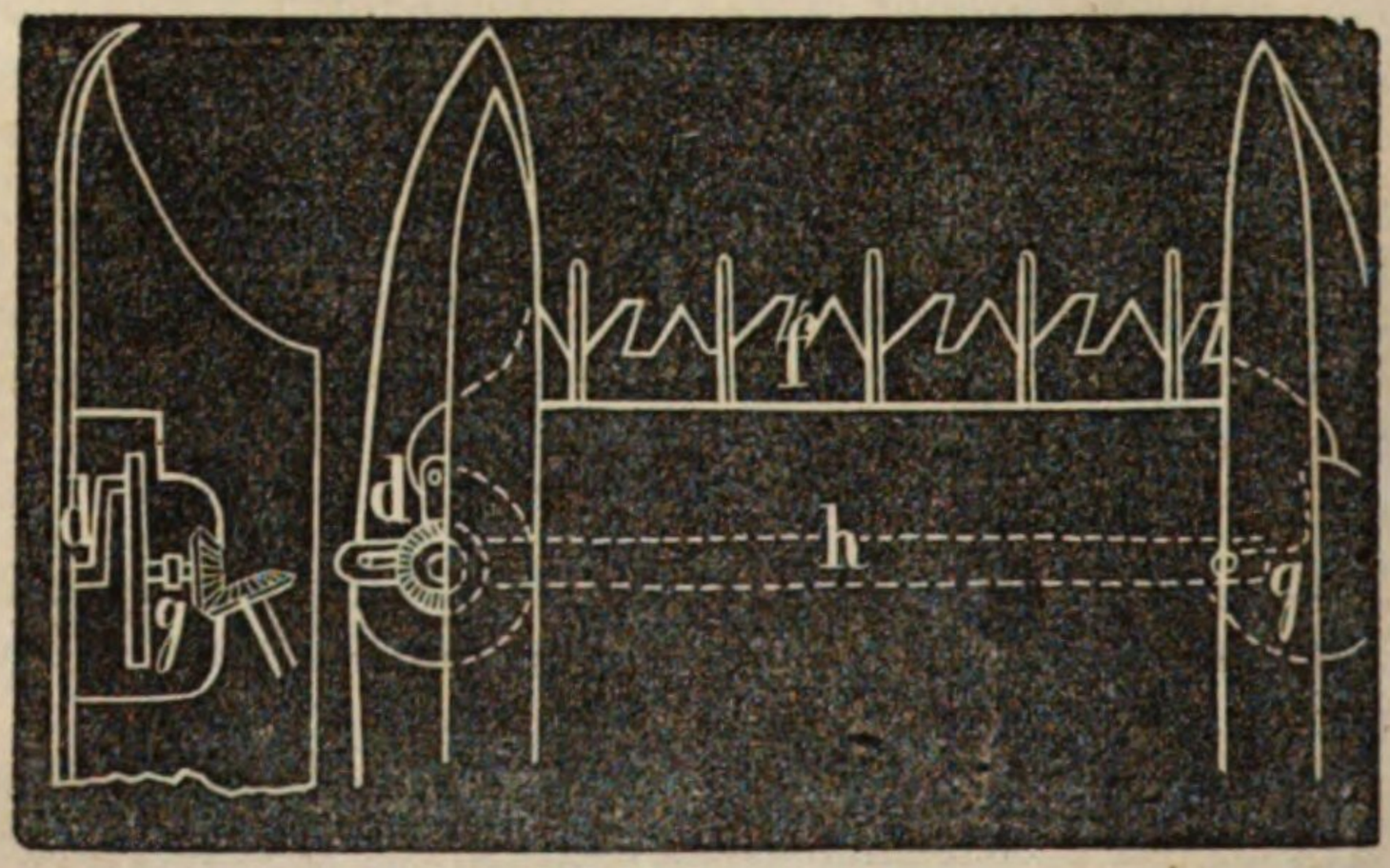


This invention refers to the manner of holding the posts and rails, and also to the mode of arranging the mandrels for cutting right and left screws, and consists in the use of eccentric cams, faced with soft metal, and operated by a lever, for holding the post in position, and also in the construction of the cams with eccentric grooves, which so operate jaws moving in them, as to hold the rail firmly for cutting the screw; the cutting being effected in both cases by reciprocating mandrels, one with a right and the other with a left screw, so supported by an oscillating frame that either can be used when occasion requires; the frame being locked by a lever and wedge during the cutting operation.

b b, mandrel heads, for cutting the post-threads; these mandrels are replaced by others when the thread is to be cut on the rails; *d*, frame, which is movable about bolt *e*, and held in position by lever *f* pressing against one side of wedge *g*. The post B is pressed into bed *h* by cams *i*, which are operated by levers *j*, and about journals K. The grooves *m m* serve to move up or down the bars *n n*, by moving lever *j*, and thereby to grasp the rail between their jaws *l*.

Claim.—Supporting the mandrels in the oscillatory frame *d*, as described, which, in combination with the lever *f* and wedge *g*, permits either mandrel to be brought effectively into operation for cutting. Also, the eccentric grooves *m* of the cams *i*, in combination with the bars *n*, for the purpose herein set forth.

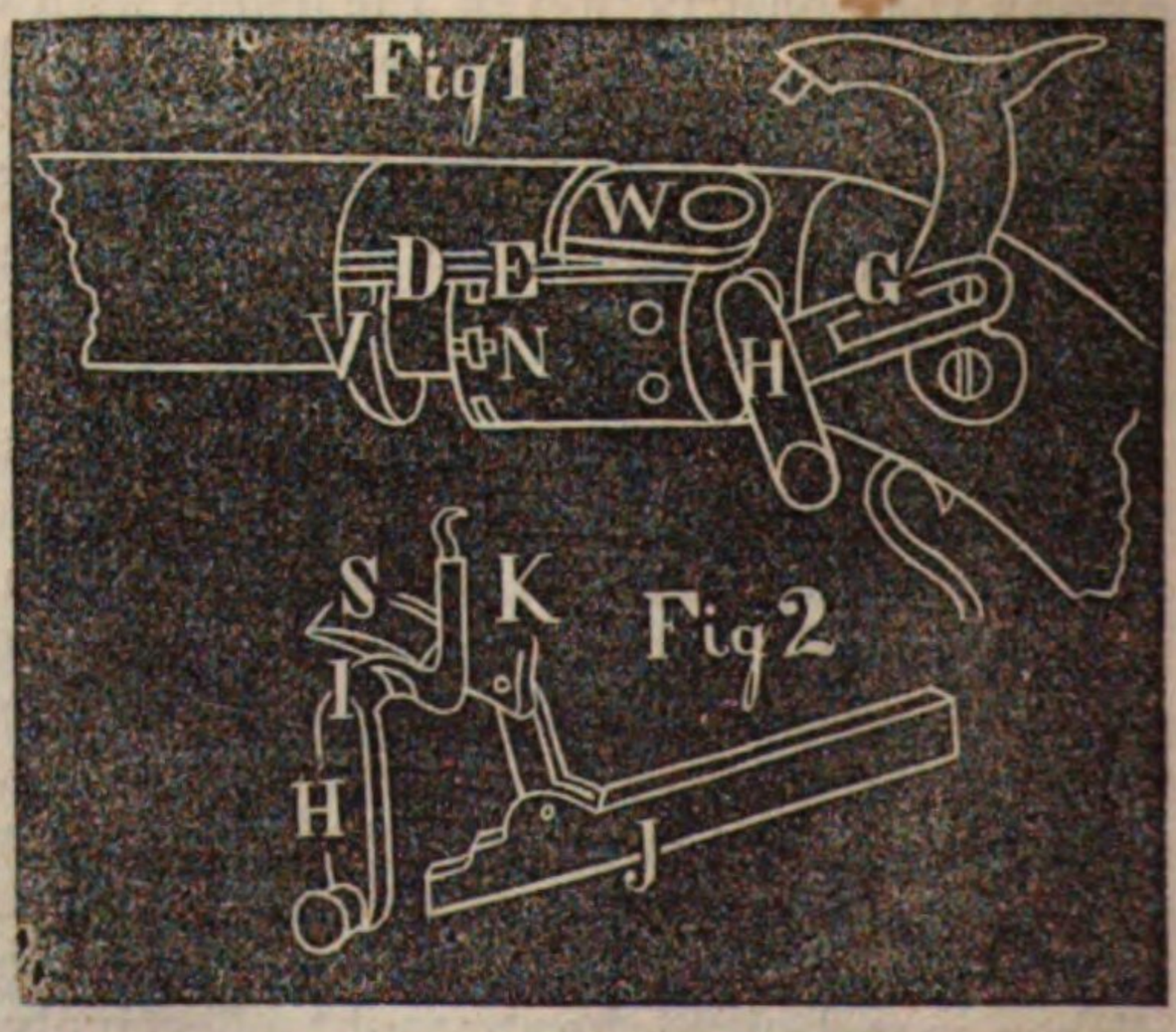
No. 10,258.—William Pierpoint, of Salem, N. J.—*Improvement in Mowing and Reaping Machines.*—Patented November 22d, 1853.



This improvement consists in the method of hanging and moving the cutters. The cutter is caused to advance in a curvilinear direction by means of the double crank-shafts *d* and *g*, which are connected by a rod *h*, and which receive their motion from the large carriage-wheel, to which the inner shaft *d* is geared. The cutting is effected by the movement of the cutter in one direction only; and during its return movement, it is shielded from the grass or grain, and thus prevented from becoming entangled thereby.

Claim.—Hanging the cutter-blade at each end to a crank, so as to cause the rotary draw-cut in form of a circle, in combination with the counter-rod *h*, for insuring the perfect revolution of both shafts in unison.

No. 10,259.—Morgan L. Rood, of Marshall, Mich.—*Improvement in Revolving Fire-Arms.*—Patented November 22d, 1853.



By reference to the annexed figure, this improvement is fully explained in the inventor's claim.

Claim.—The arrangement by which the guide-pin D, in connection with the stop-notches N N, adjusting spring E, and the hook connection between the smoke-guard W and rock-shaft I, causes a more perfect joint, and more secure connection between the cylinder and barrel; thus preventing all leakage, keeping the cylinder and its attachments clean, and protecting the surrounding charges from taking fire. Also, the arrangement of

the slotted arm G and the hammer, by means of which the gun may be cocked, with or without moving the cylinder.

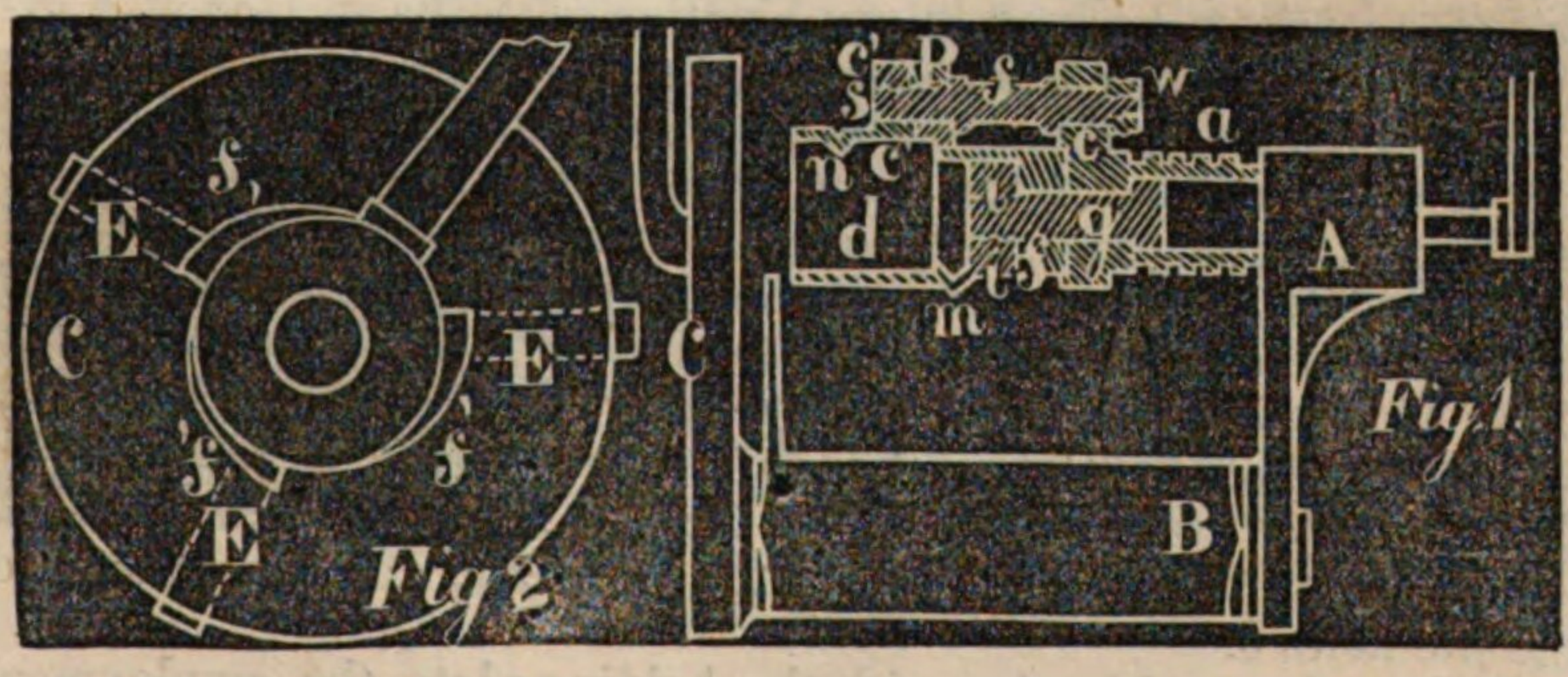
No. 10,260.—WILLIAM SILVER, Jr., of Pittston, Pa.—*Improvement in the Manufacture of Blasting-Powder.*—Patented Nov. 22d, 1853.

The object of this improvement is the production of a powder that may safely be used in mines, and that will produce less suffocating gas when it is ignited. In the manufacturing of this powder, 19½ lbs. of prepared charcoal, 68 lbs. of good saltpetre, and 12½ lbs. of good sulphur, are ground together, pressed, and granulated. A strong solution of chlorate of potash is then sprinkled upon the granulated powder, until it becomes thoroughly moistened, the powder being stirred whilst it is being sprinkled. The powder is left about four days in a room heated to 100° Fahr., when it is ready for use.

Claim.—The blasting-powder, as above set forth; the same consisting in an unglazed powder, composed of charcoal, nitre, and sulphur, in the proportions specified, prepared and treated with chlorate of potash, as set forth.

"I do not claim the use of chlorate of potash as a means of preventing smoke in mine-blasting, except when combined with charcoal, sulphur, and nitre, in the manner set forth."

No. 10,261.—HIRAM SMITH, of Norwalk, Ohio.—*Improved Apparatus for Cutting Screws on Bedstead-Rails and in Posts of the same.*—Patented November 22d, 1853.



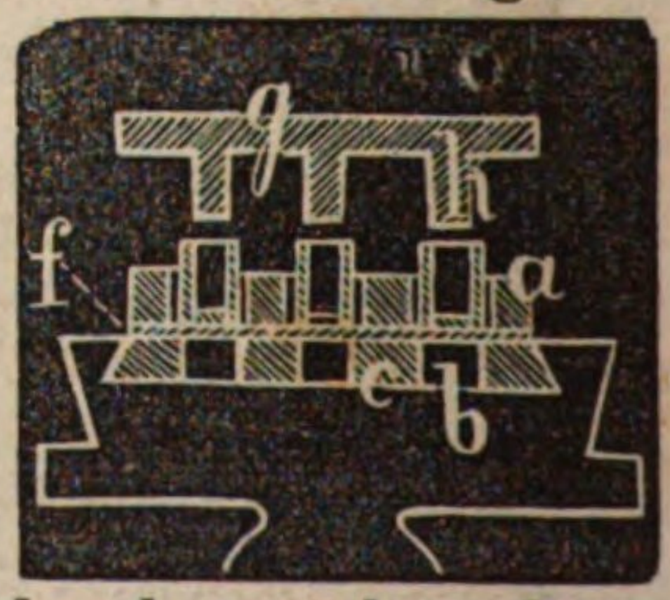
This improvement, which refers to the manner of attaching the v cutters to the cutter-heads, the attachment of the cutter-heads to the spindle, and the mode of securing the machine to the rails and posts when in operation, consists in constructing the cutters so as to form a portion of the cylindrical section of the head, attached by a base at right angles to the axis of the head, by means of bolts passing, in the case of the cutter of the male screw, through an ear upon the exterior of the head, and in the other case, through the axis of the spindle. Also, in the employment of a system of clamps, for the purpose of attaching the cutting machinery to the posts and rails during the operation of forming the threads. The operation of cutting the screws is as follows. (See figure.) The rail is first secured to a joiner's bench, or

in a vise, and the clamp C passed over its end until the shoulder of the rail rests against the stop z on the block B, the extremity of the tenon entering the head *d* of the spindle *a*, which is withdrawn to the full extent of its thread. The lever L of the plate W is then moved to the right, forcing out the slides E and firmly grasping the rail. The cutting is performed in the usual way. The screws at both ends may be cut at the same time, by securing longitudinally, at opposite ends of the bench, cutters and clamps, as described. The operation of cutting the post-thread is similar to that described for the rail.

Claim.—The formation of the V cutters as described in sections of the cutter-heads, which are secured by means of screw-bolts. Also, securing the section of cutter-head containing the post V cutter by means of a polygonal-headed bolt passing as described through the hollow spindle, cutter-head, and section-base; which arrangement, in addition to securely holding the V cutter, admits of the adjustment of the cutter, for insuring the formation of tight joints between the post and rail. Also, the method of attaching the tenon-socket *d* to the spindle. Also, the arrangement of the standards A and G, and clamp C upon the blocks B and H, by which the machine is secured to the post and rails, and the operation of cutting facilitated.

No. 10,262.—JOSEPH GOLDMARK, of New York, N. Y.—*Improvement in Facing the open ends of Percussion Caps.*—Patented November 22d, 1853.

The nature of this invention consists in inserting a series of percussion caps in appropriate holes made in a plate fitted to or making part of a stock, to be used in combination with the surface of a grinding wheel, so that when so inserted in the holes of the plate, with the open ends outwards, they may be reduced to the same level by the grinding surface. Also, in the employment of another plate with similar holes for guiding the caps, as they are thrown upon the holding-plate, that the caps may readily enter the holes in the holding-plate. (See fig.) *g* is the plate provided with punches *h*, which is let down so that the punches fit into the caps and and press them down into the holes *b*.

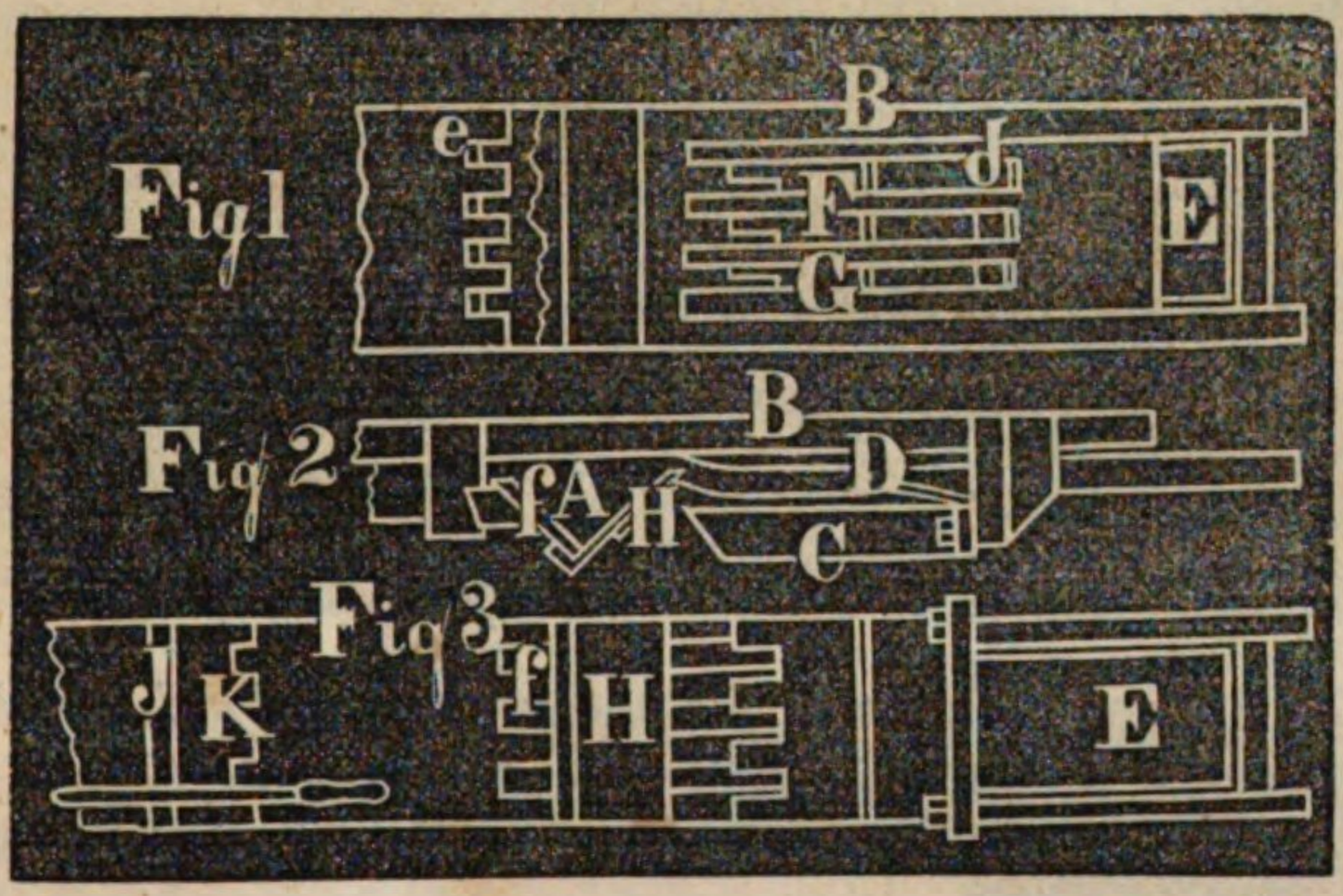


Claim.—In combination with the holding-plate, the employment of the guide-plate, to facilitate the insertion of the caps into the holes of the holding-plate, for the purpose described. Also, in combination as specified, the employment of the plate with the series of punches or pins, for the purpose of forcing all the caps to the required depth in the holding-plate.

No. 10,263.—ENOCH R. MORRISON, of Troy, Pa.—*Improvement in Shingle Machines.*—Patented November 22d, 1853.

The nature of this invention consists in carrying the riven shingle forward by an intermittent motion, so as to be operated upon successively by the shaving and edging knives, the motion being imparted

by the reciprocating movement of the riving knife-stock, through spring-hooks, stops, or dogs, or their equivalents. Fig. 1 is a top view; fig. 2 a side view, and fig. 3 a view of the under side of the machine.



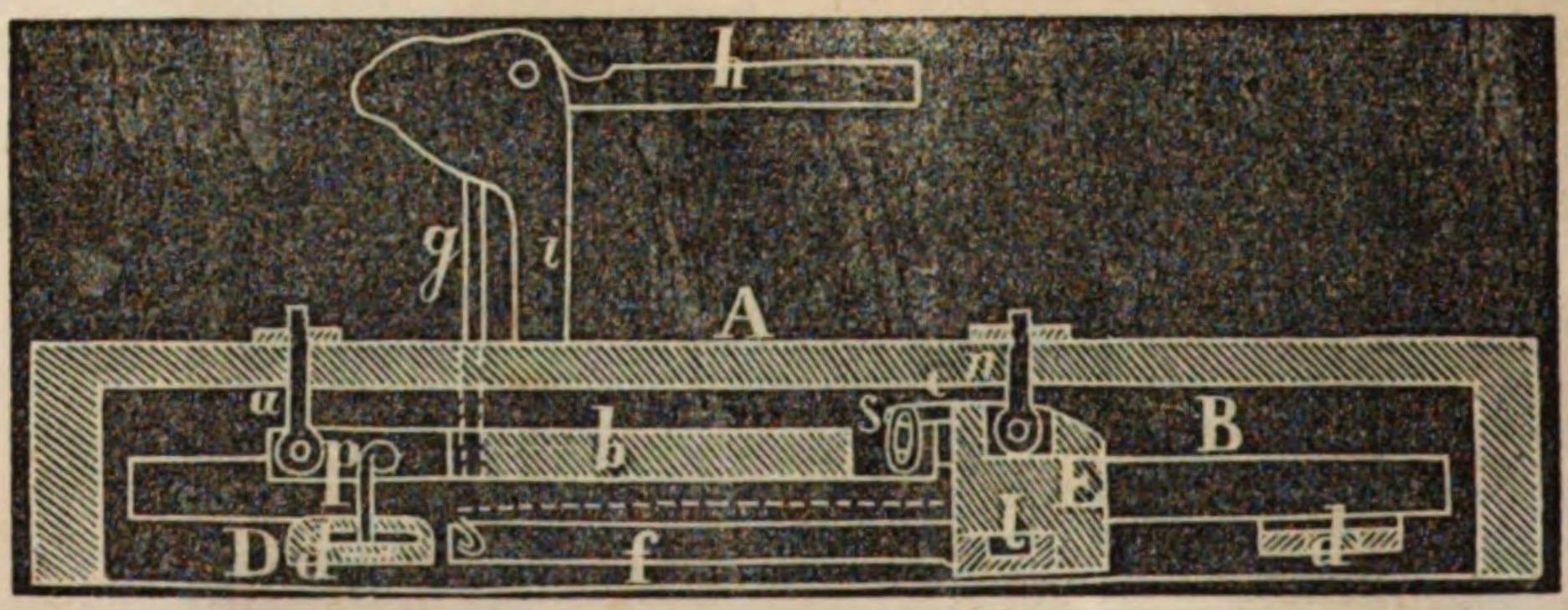
The bolt of timber is placed upon the rest C, which is connected with the stationary bed B; the reciprocating frame A, carrying the riving-knife D, moves forward and severs the shingle from the bolt, and it drops upon the second bed F. When the frame A returns for the next riving operation, the shingle last riven is caught by the dogs *d*, and carried forward, and held down by the spring-plate G, until it is caught by the spring-dogs *e e*, which rise up to catch the end of the shingle. As the frame A returns, the knife H shaves one side of the shingle; the spring-dogs *f* are also attached to frame A, and after the last operation, drop behind the shingle; and after the release of the dogs *e e*, *f* takes their place, and carry, by the forward movement of the frame, the shingle to the shaving-knife J, which shaves the opposite side. The knife J being attached to the fixed-frame B, the rear portion of the moving part now becomes the bed against which the shingle is held by the spring-plate K.

Claim.—The combination of a reciprocating river and finishing knife, with a fixed knife; so that on the backward motion of the river one face of the shingle shall be dressed, and by its next forward motion the second face will be dressed by the fixed knife.

No. 10,264.—Elnathan Sampson, of Cornish, N. H.—*Improvement in Platform Scales.*—Patented November 22d, 1853.

Near the corners of the frame, four hangers *a a a a* are attached, and support four levers *b b b b*, the vibratory ends of which are suspended at *s s s s*, from the ends of two short levers *e*, that are attached to a vibratory shaft E, passing crosswise under the middle of the frame, and supported by two hangers *n n*, attached to the sides thereof. Two beams D *d* pass crosswise under the frame, and support the platform B; these beams may be extended at both ends by means of sliding-bars *d d d d*, which fit in grooves. The bars are sunk entirely into the

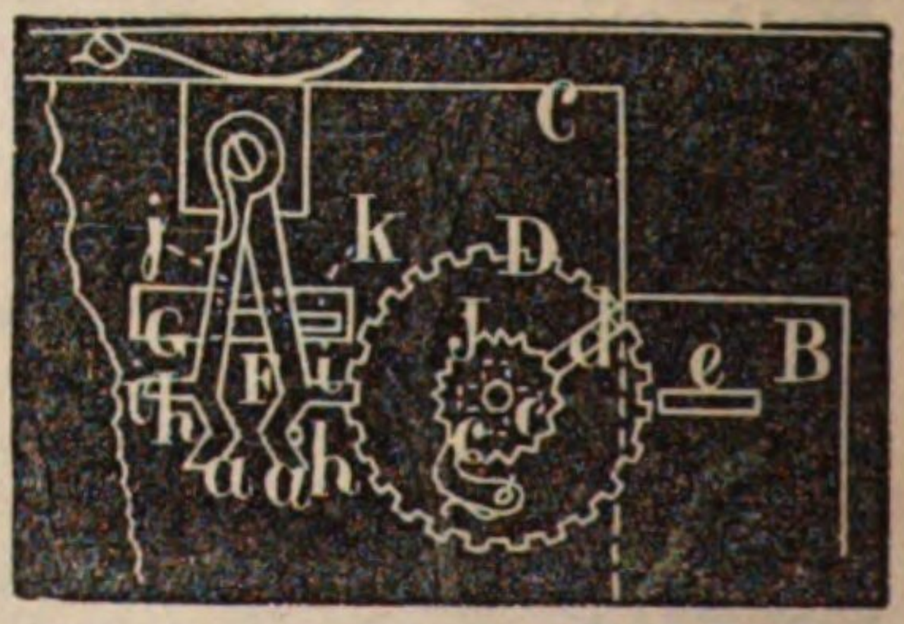
beams when not in use. The bars on one side are to be drawn out and a plank laid on them, whenever any thing wider than the platform is to be weighed.



Claim.—The combination of the sliding-bars *d d d d* and *l*, with the platform, the actuating-levers, and the scale-beam, in such a manner as to enable the platform to be laterally expanded or contracted.

No. 10,265.—James H. Crygier, of New York, N. Y.—*Improvement in Bank and Safe Locks.*—Patented November 22d, 1853.

This improvement consists in the use of lever-guards, so arranged as to be thrown into circular toothed disks, when the bolt-tumbler is raised by the key; the lever-guards being operated by the bolt-tumbler, instead of being directly operated upon by the key. The lever-guards prevent the lock from being picked by pressure obtained upon the bolt. Also, in the peculiar manner of effecting the changes, or of altering the position of the indexes. (See figure.)



Claim.—The employment or use of the lever-guards F F′, constructed and arranged so as to operate against the disks D, and prevent them from turning as the bolt-tumbler C is raised, as shown and described in specification. Also, connecting the ratchets J to the circular toothed disks D, by means of pawls *s*, and operating said pawls by means of the tumbler M or its equivalent; whereby the ratchets may be connected and disconnected from the several disks D simultaneously, and the changes effected with the greatest facility.

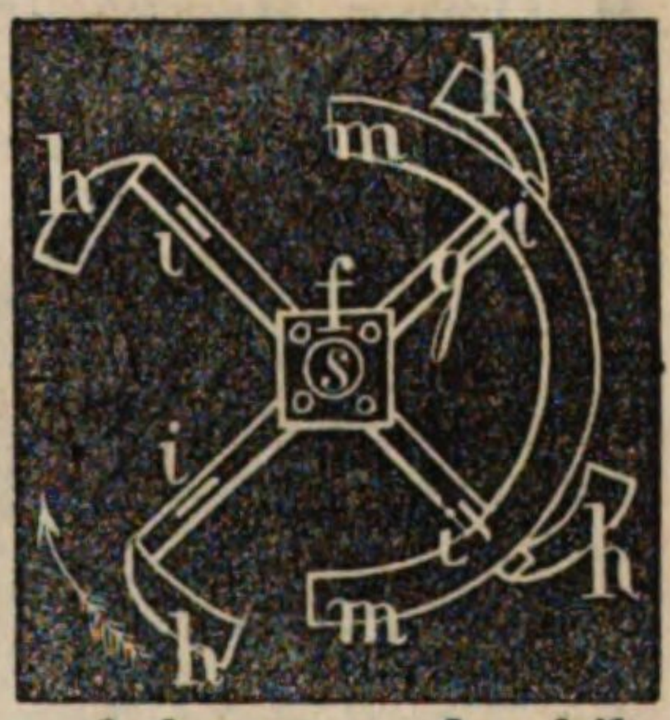
No. 10,266.—Lawrence F. Frazee, of New Brunswick, N. J.—*Improvement in Life-Floats.*—Patented November 22d, 1853.

The nature of this invention consists in combining together buoyant vessels, shaped and arranged by means of a frame; the vessels being made of canvas, india-rubber, or oil-cloth, stuffed with cork or its

equivalent; constituting as a whole a life-float, not liable to accident, nor expensive; but capable of propulsion, light, and always right side up, no matter in what manner it is thrown into the water. The frame is made of hickory wood. The bottom is one of the floats or balsas, and the two sides are also balsas or floats, constructed as above described.

Claim.—The combination of the balsas, shaped and arranged with respect to each other as described, with the frame which keeps them in shape and position, and is itself protected by the balsas; the whole constituting a life-float, having the qualities set forth.

No. 10,267.—William K. Hall, of Phillippi, Va.—*Improvement in Mowing Machines.*—Patented November 22d, 1853.

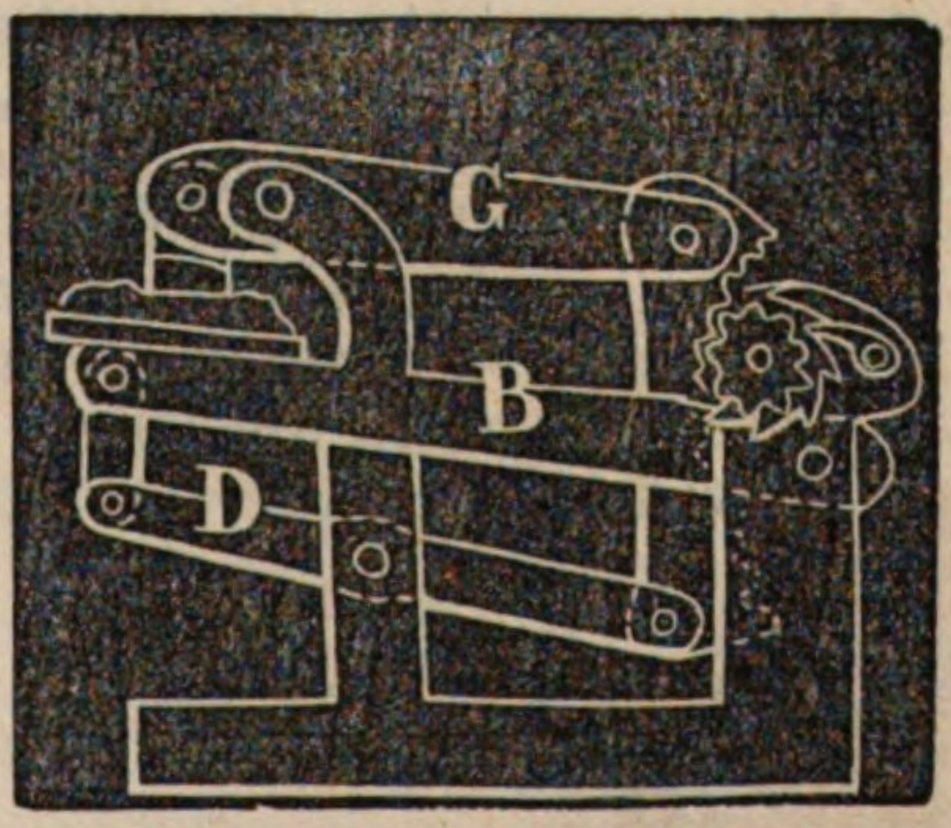


In this machine the revolving-blades *h*, (see fig.) attached to arms *g* revolve round the vertical-shaft *s*. This improvement consists in attaching to the frame of the machine a semi-circular tram *m m* slightly elevated in the rear at *a*, upon which staples *i*, attached to the arms *g*, run after the cut is made, for the purpose of raising the knives *h* above the surface of the ground, while performing the rear portion of their revolution.

Claim.—The tram *m*, in combination with the staples *i*, on the arms *g*, substantially as described, for the purposes specified.

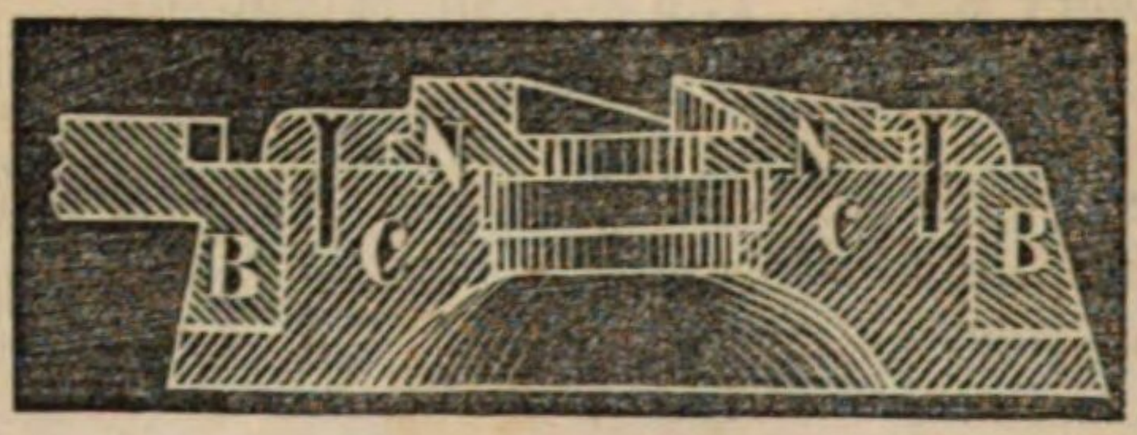
No. 10,268.—S. R. Holt, of Worthington, Ohio.—*Improvement in Self-Acting Presses.*—Patented November 22d, 1853.

By reference to the annexed figure the claim explains this improvement.



Claim.—So arranging the lever G, and providing it with a self-adjusting follower, in combination with the lever D and the bed-plate, with its supporting frame B, that the motion of the article pressed may be transmitted to the long end of the lever G, at or near the fixed centre of motion of the frame B; causing the weight of the press and article being pressed to exert power on the follower, and thereby gradually press the article into a more compact and solid form; the power being increased, when the weight of the article is not sufficient, by means of the pinion and rack-bar, which receive motion from a driving-shaft; the whole being constructed, arranged, and operating substantially as set forth in the specification.

No. 10,269.—Willard B. Cummings, of Tyngsborough, Mass., and Nathan P. Dadman, of Chelmsford, Mass.—*Improvement in Machines for Dressing Mill-Stones.*—Patented November 22d, 1853.



This improvement refers to the machine patented by S. W. and R. M. Draper, May 25, 1852, and consists in an arrangement by means of which the pick is caused to revolve upon a block made fast to the stone; the block serves as a bearing and a guide for the head-piece B, which is designed to prevent any tremulous or other motion from being communicated by the revolution of the cam to the bar A and the parts carrying and giving motion to the pick.

Claim.—The combination of the pedestal C, the head-piece B, and the cam N, for the purpose described.

No. 10,270.—Samuel F. Allen, of New York, N. Y.—*Improvement in Fluid-Burners or Lamps.*—Patented November 29th, 1853.

(In the figure, F represents the wick; *j*, wire-gauze; *s*, slit; A, vessel containing the camphene.) This invention consists in making the flame-tube of greater length on either side of the vertical wick-tube, and in combination with the same, encasing the wick which it carries inside of the fine wire-gauze which serves to give out the fluid in a spread and open state, and consequently to make the light more powerful, or brilliant and open, and also preserve the wick a great length of time from being charred or consumed.

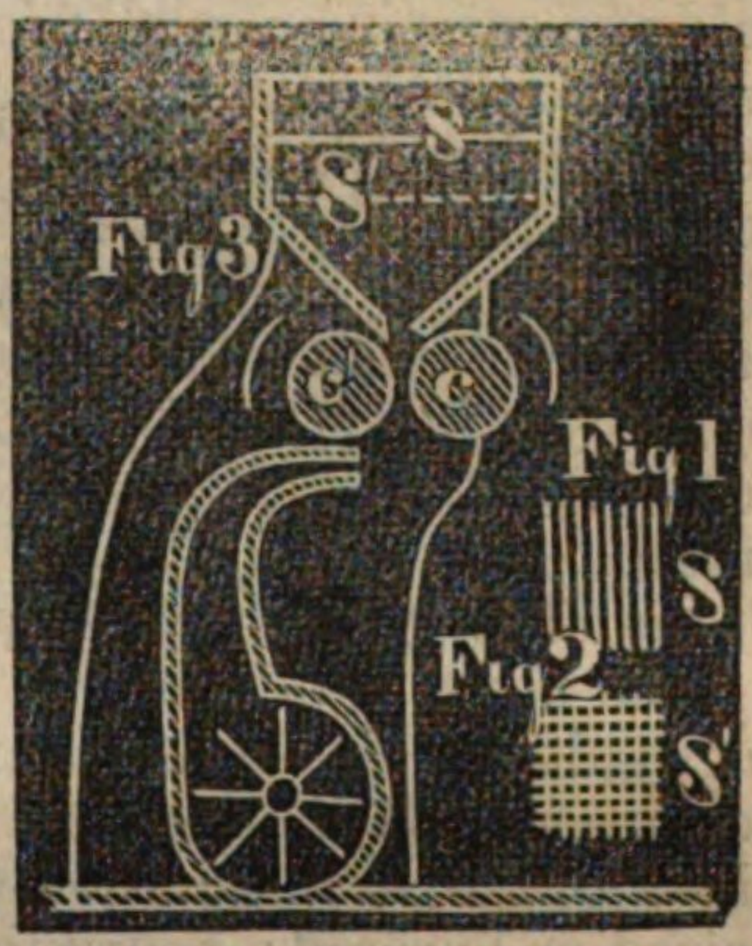
Claim.—The horizontal flame-tube, for burning camphene and like fluid, having a long slit cut in its top, in combination with the wick F, when encased in wire-gauze; the encasing of the wick in gauze causing the fluid to be discharged and burned in a sheet the full length of the slit.

No. 10,271.—J. Bloom, of East Woburn, Mass.—*Improvement in the Method of Absorbing Smoke.*—Patented November 29th, 1853.

The nature of this invention consists in passing the smoke through water, it being conducted in pipes to the hollow of a suitable reservoir, made air-tight and nearly filled with water, which reservoir is kept constantly exhausted by air-pumps.

Claim.—Passing the smoke of furnaces or other fires through water, by means of air-pumps, in the manner described, and for the purpose set forth.

No. 10,272.—M. C. Gritzner, of Washington, D. C.—*Improved Mode of separating Precious Metals from Ores, Sand, &c.*—Patented November 29th, 1853.



The nature of this invention consists in the arrangement of two or more screens, one having oblong and the other square meshes, the square meshes to be of the same size of the short diameter of the oblong meshes, for the purpose of separating and retaining the leaf or flake gold, and permitting the balance of the material to be subjected to a blast, in uniform or nearly uniform sizes, so as to be differently operated upon by their different specific gravities. Also, in the interposition of guide-rollers, or their equivalents, between the shaking-hopper and the blast, for the purpose of guiding or bringing the material in a proper manner to the blast.

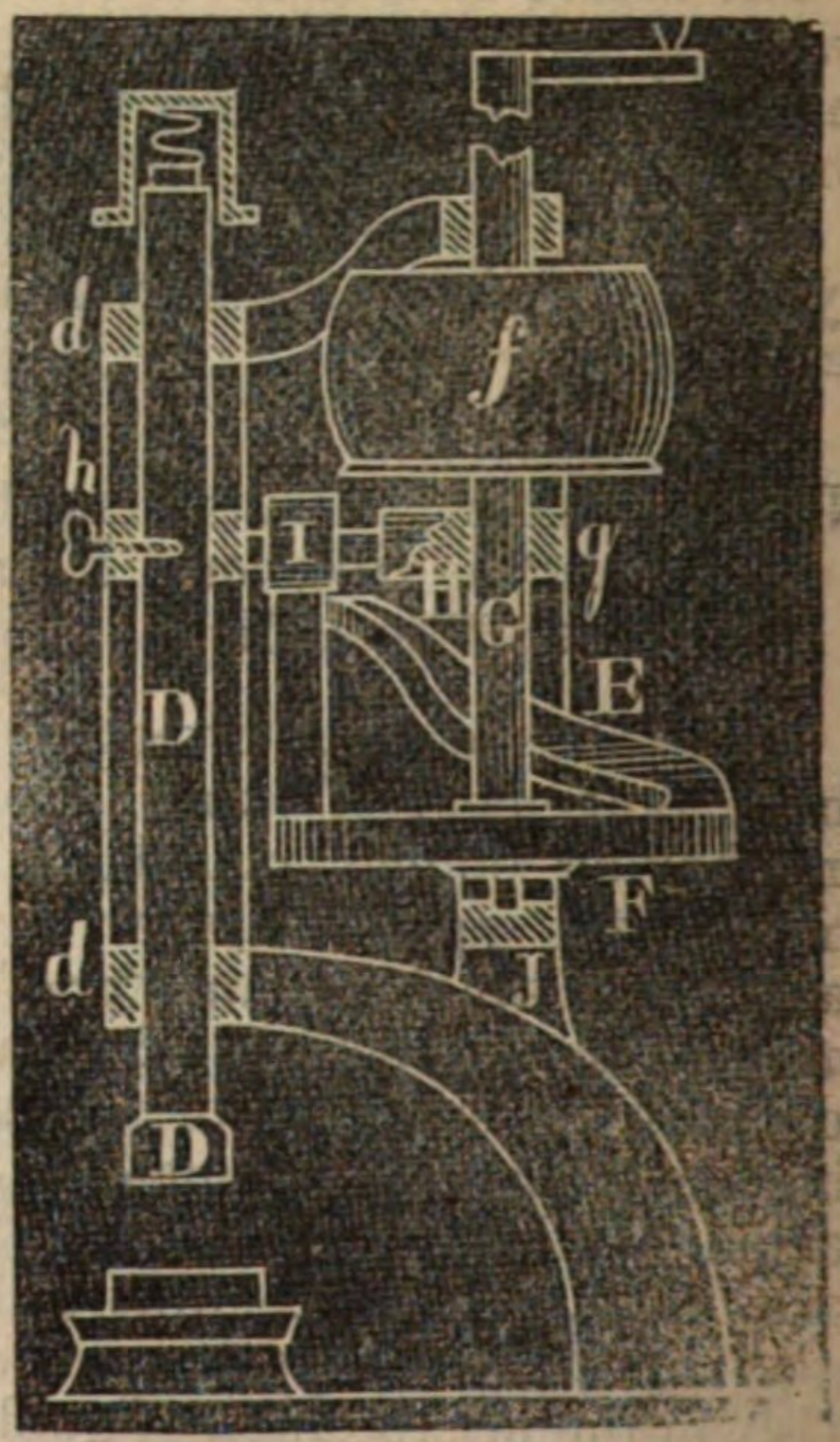
Claim.—The arrangement of the screens s s′, constructed and operating as set forth, for the purposes specified. Also, the interposition of the guide-rollers, or their equivalents, in the manner and for the purpose described.

No. 10,273.—Benjamin F. Miller, of New York, N. Y.—*Improvement in Iron Fences.*—Patented November 29th, 1853.

A and B represent the ends of the halves of the top rails and of the bottom rails; E E are the filling-bars, with their countersinks D D; F F are bosses cast on the rails to fit the countersinks. By this mode of construction the fence is adapted to fit any grade or inclination of ground.

Claim.—Constructing the top and bottom rails in "lateral halves," and holding said halves together by screws, rivets, or bolts, in combination with bosses or pivots cast on the inside of the respective halves of the rail, with corresponding countersinks or perforations near the ends of the filling-bars.

No. 10,274.—John W. Peer, of Schenectady, N. Y.—*Improvement in Vertical Trip-Hammers.*—Patented November 29th, 1853.



The nature of this invention consists in raising and lowering the hammer by means of a screw-cam arranged upon a circular-plate, secured fast on a revolving shaft, and connected to the helve of the hammer by means of a horizontal lifting-arm, which has one of its ends attached fast to the hammer by set-screws, and its other end sliding freely up and down over the vertical cam-shaft as the hammer rises and falls, said arm carrying a small friction-roller, which as the cam-shaft revolves, turns freely and plays upon the top of the screw-cam, and prevents friction from the weight of the hammer upon the cam, as the hammer is gradually raised by the cam. Also, in arranging the screw-cam upon a frame which is adjustable, to vary the length and force of the blow given by the hammer.

(See figure.) D, hammer; *d d*, hammer-guides; E, screw-cam; F, the screw-cam plate, secured to revolving shaft G, the lower end of which rests on the table J, which can be raised or lowered; *f*, driving-pulley; H, arm; *g* and *h*, two collars of arm H; L, friction-roller.

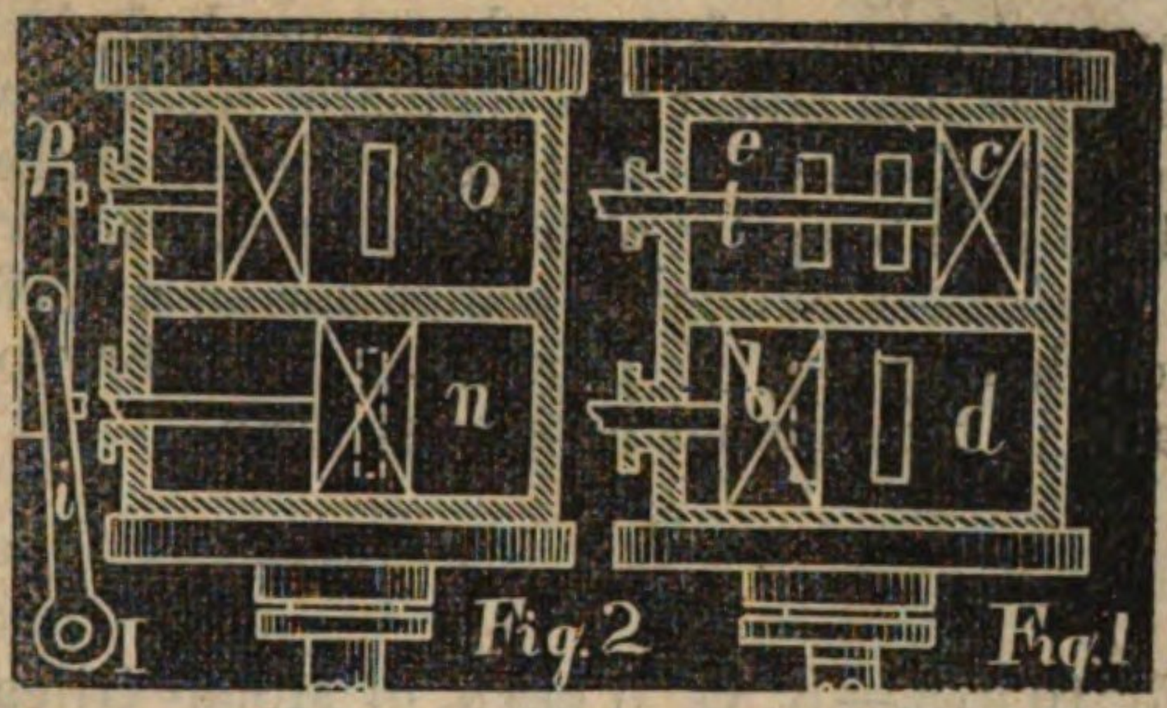
Claim.—The arrangement of the screw-cam E, and the adjustable table to which it is attached, for the purposes described.

No. 10,275.—David N. Ropes, of Meriden, Conn.—*Improvement in the Mode of fastening Handles to the Blades of Table-Knives and Forks.*—Patented November 29th, 1853.

K is the blade; *c*, the cap; *s*, screw; H, handle; *o*, hole in cap *c*; *h*, thread cut in the handle. When screwed together, the bolster *g* is soldered to cap *c*.

Claim.—The use of the metallic cap, interposed between the handle and the blade of the knife or fork, and secured to each substantially in the manner described.

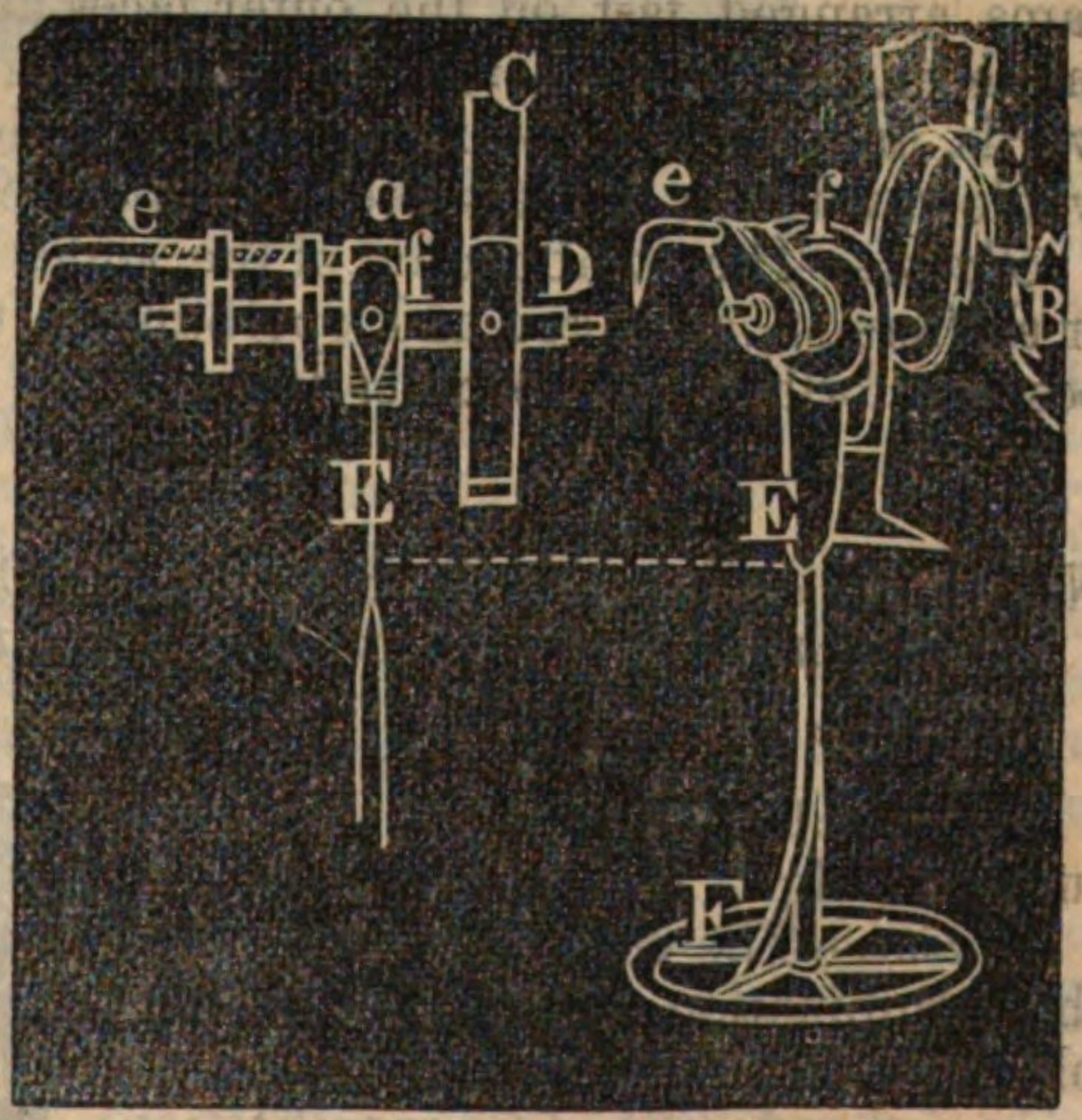
No. 10,276.—Robert R. Taylor, of Reading, Pa.—*Improvement in Valves, Ports, and Passages for operating Steam-Hammers.*—Patented Nov. 29th, 1853.



The steam-valves are so arranged that the steam can at will be made to act on the lower side only of the piston, or on its upper side, with more or less force. The chests and valves of the steam side are shown in fig. 1, and of the exhaust side in fig. 2.

Claim.—The arrangement, as described, of the steam ports and passages; the variable automatic valve, for directing the steam alternately above and below the piston, and for admitting a variable quantity of steam beneath the piston; and the adjustable hand-valve, to exclude altogether the steam above the piston, or to admit a greater or less quantity of it; both valves being adjustable while the hammer is in operation, so that the steam can be made to act with a variable force on either the up or down stroke of the piston, or on both, or prevented from acting on the down stroke, without interrupting the action of the hammer, as herein set forth.

No. 10,277.—Silas B. Terry, of Plymouth, Conn.—*Improvements in Time-Pieces.*—Patented November 29th, 1853.



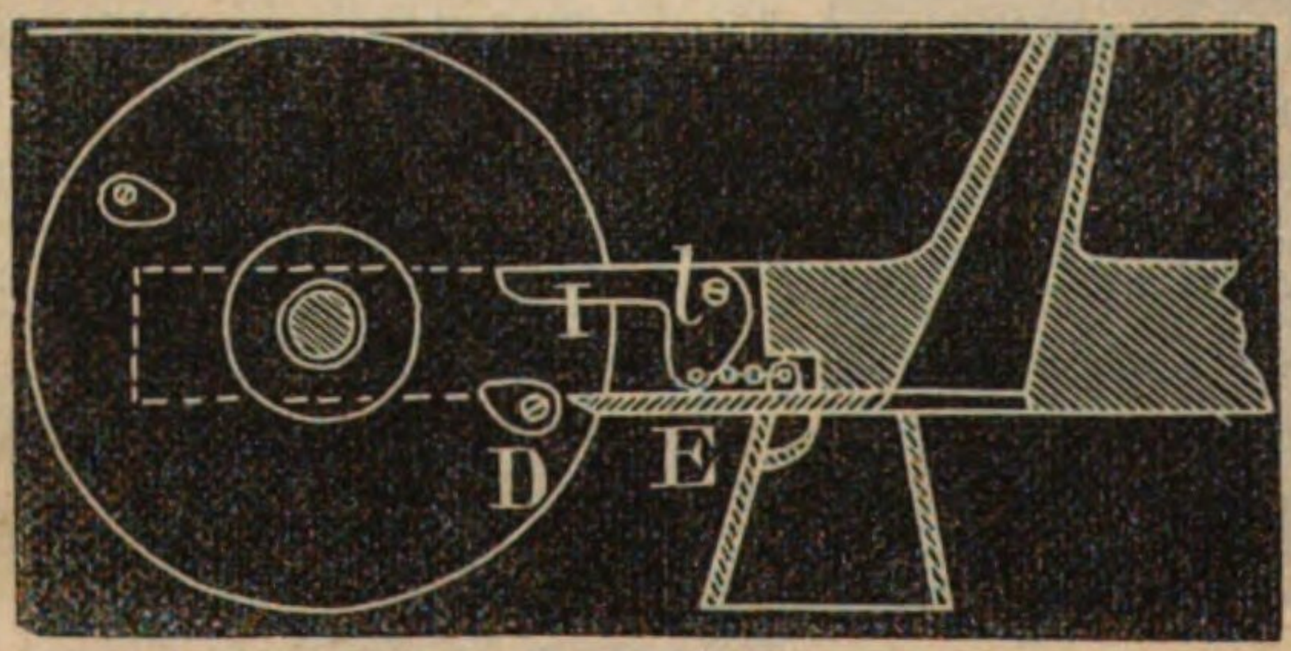
This improvement is applicable to the "marine clock," and consists in making the "fork or crutch-wire" a flat and elastic spring at and near the end where it is attached to the verge or verge arbor, the opposite end being made small and round to enter a hole perforated in the arm of the balance-wheel, or in a collet on the balance arbor or spindle. This arbor is placed at right angles to the verge arbor, and in a line with the crutch where it is attached to the verge arbor. The spring part of the crutch should be made of sufficient strength to produce the oscillations or vibrations of the balance, when set in motion by the motive power of the clock, in about such time as may be desired. It consists also in regulating the force

of the crutch-spring by increasing or lessening its tension, by means of screws and a collet.

(See figures.) B, escapement-wheel; C, verge; D, verge-arbor; E, crutch-spring attached to the verge-shaft by means of collet *a*; F, balance; *d d*, cams fast to the verge-shaft, in each of which are female screws which admit the regulator screw *e*, which screw terminates on the wire *f*, which is flattened where it passes partly round collet *a*, to which it is hung by pins J, and in contact with the crutch-spring.

Claim.—Making the crutch-spring E perform the office of the common hair-spring in producing the vibrations of the balance, substantially in the manner herein set forth.

No. 10,278.—R. C. WRENN, of Mount Gilead, Ohio.—*Improvement in Seed-Planters.*—Patented November 29th, 1853.



This invention consists in the employment of the elbow slide-shifters attached to the bottom of the slides, in combination with one or more cams arranged fast on the outer faces and near the periphery of the propelling wheels, whereby the slides can be moved inwards and outwards, and made to perform their functions at every quarter, half, or whole revolution of the wheels, as may be desired.

Claim.—The combination of the slides E, cams D, and elbow levers or shifters I J, arranged and operating in the manner and for the purpose set forth in the specification.

No. 10,279.—EPHRAIM B. BENEDICT, of Clinton, N. Y.—*Improvement in Fastening Shafts to Axles of Carriages, &c.*—Patented November 29th, 1853.

Fig. 1 is the clip; fig. 2 the slotted tumbler; fig. 3 the draught iron.

Claim.—The coupling, consisting of the combination of the clip, the tumbler, and draught iron, constructed and arranged as described (in specification), for the purpose of a secure and expeditious attachment of the shafts or pole to carriages and other vehicles.

No. 10,280.—ERASTUS T. BUSSELL, of Shelbyville, Ind.—*Improvement in the combination of India-Rubber and Steel.*—Patented November 29th, 1853.

This improvement consists in a combination of vulcanized india-rubber with spiral steel, so arranged that each sustains the other, so as to make a "most perfect spring" for elasticity and durability, which is applicable to railroad cars, carriages, buggies, &c. In the figure, *d d* represent the metallic caps on each end of a fluted column of india-rubber (of which *c'* is a section), surrounded with steel spring *f*.

Claim.—Fluting a column of vulcanized india-rubber longitudinally, and then surrounding it with the helical spring: being an improvement on "Ray's spring."

No. 10,281.—SAMUEL CHAPMAN, Jr., of New York, N. Y.—*Improvement in Machines for Sawing Stone.*—Patented November 29th, 1853.

Fig. 1.

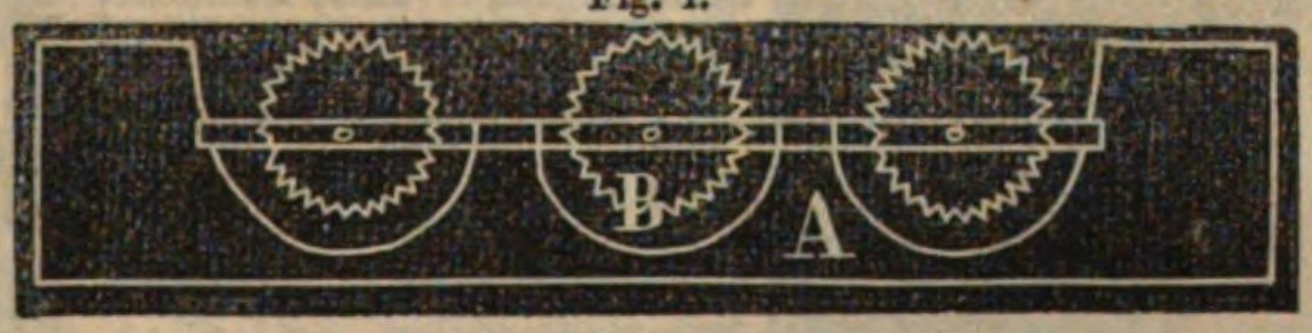
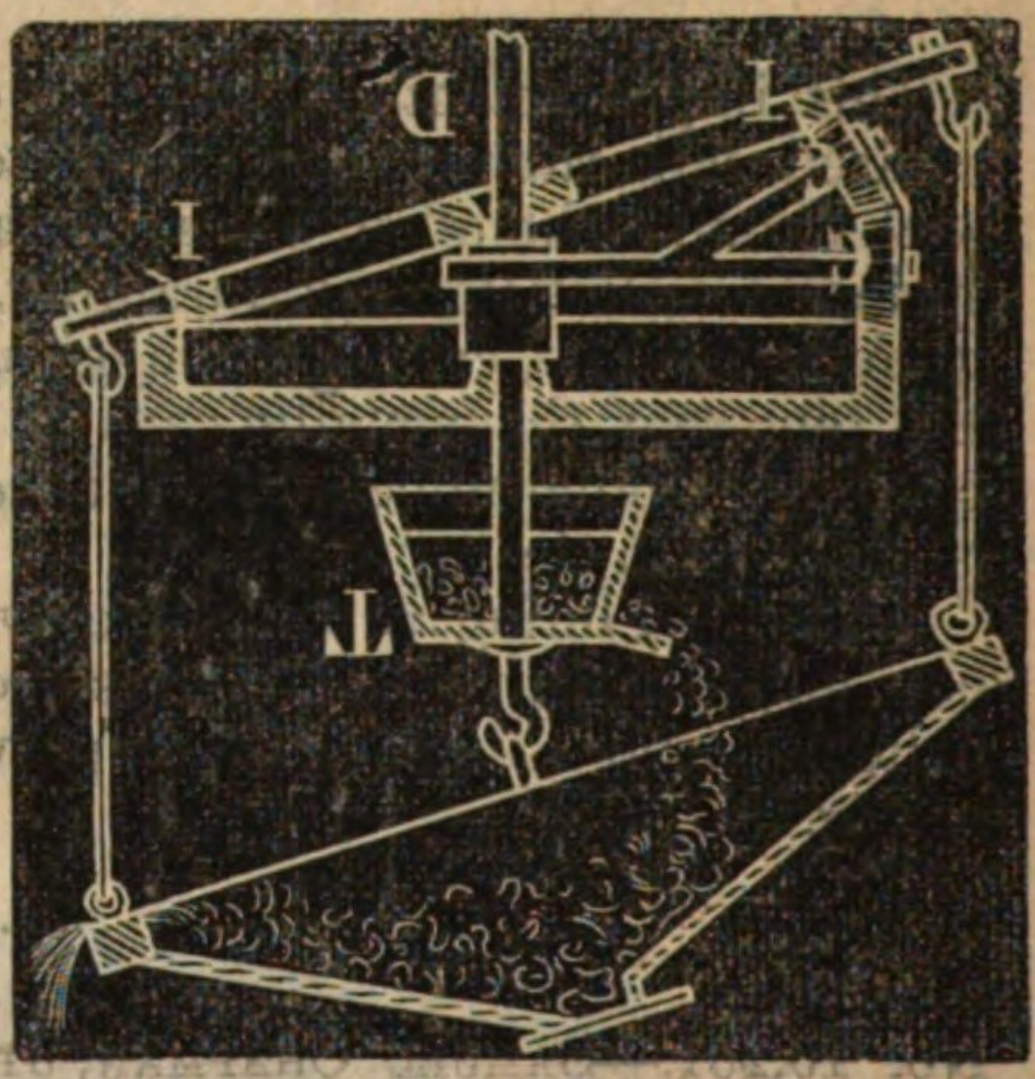


Fig. 2.

The nature of this invention consists in the application, adaptation, and arranging of a series of circular saws, attached in alternate countersinks or perforations to the sides, near the edge of a straight, or the periphery of a circular driving-plate, in such a manner as to cut an entire kerf, of sufficient width to allow the combination of saws and their fastenings to pass through, in like manner as a saw of ordinary construction, changing by this combined arrangement the cut or working effect of the teeth from the ordinary drawing cut, parallel with the line of motion, to the effect or cut of the edge of a chisel or drill driven from and nearly perpendicular thereto, pressed to and penetrating the stone, in direction, and by force and leverage resulting from motion, consequent upon this combined arrangement.

Claim.—The application, adaptation, and arranging of a series of circular saws, as set forth, so as to produce the effect, in the manner described.

No. 10,282.—Richard Edwards, of Eagle River, Michigan.—*Improvement in Machinery for Washing Ores.*—Patented November 29th, 1853.

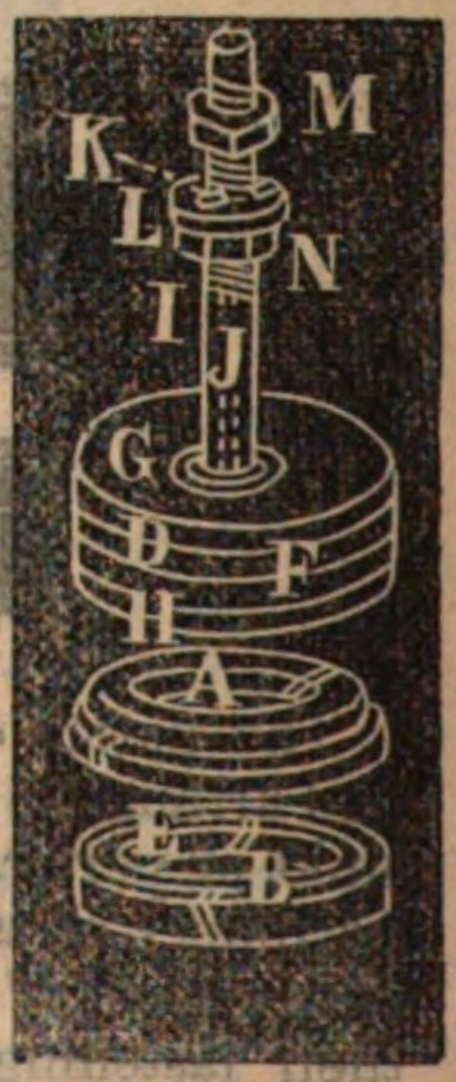


This invention is applicable more particularly to the washing of copper ore upon a large scale, and consists in the employment of a rotating hopper L (see fig.), and a suspended oscillating basin.

D is the revolving-shaft; G G, wheels attached and revolving with the shaft, the lower wheel resting on a stationary circular way, and the upper wheel striking against the ways I I.

Claim.—The rotating-hopper, and the suspended oscillating basin, arranged and operating as described in specification.

No. 10,283.—John Crabtree and Joseph Hopkinson, of Philadelphia, Pa.—*Improved mode of Packing Steam-Engines, Pumps, &c.*—Patented November 29th, 1853.



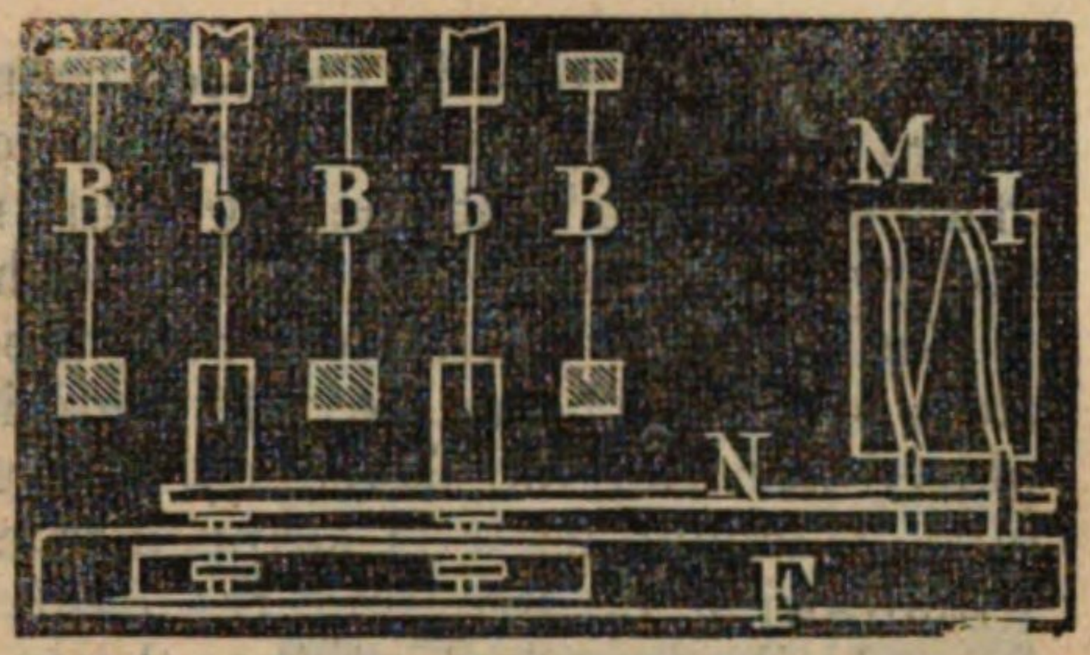
This invention consists in a peculiar mode of tightening the packing of pistons of steam and other engines and pumps, whereby the necessity of removing the cylinder-head, or follower, for the purpose of adjusting or tightening the packing, is entirely obviated.

The packing is composed of two pairs of conical rings A B, each pair consisting of two rings.

Claim.—Tightening the packing of the piston by the rod passed down through the hollow piston-rod, and attached to follower, the nuts, key, and hollow piston-rod, combined and operating substantially as described in the specification.

No. 10,284.—Israel Graves and Charles A. Bogert, of West Dresden, N. Y.—*Improvement in Shingle-Machines.*—Patented November 29th, 1853.

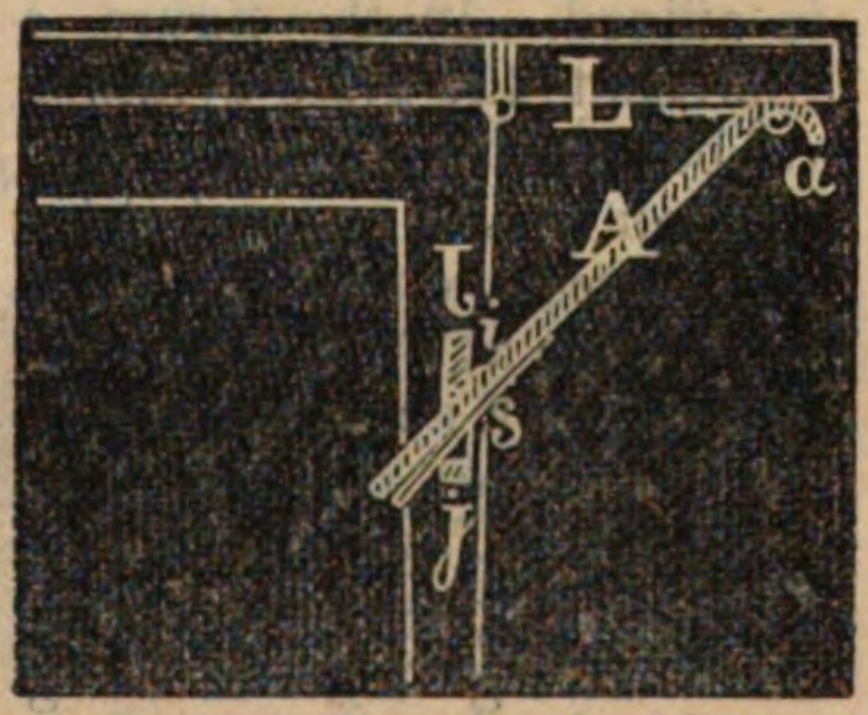
This invention consists in the employment of a gang of stationary and movable vertical saws, hung in an ordinary saw-gate, and so arranged in connection with cams, or their equivalents, that the movable saws will be caused, as the gate moves up and down, to have a gradual lateral movement from and towards the stationary saws as the stuff is fed in, and also at the same time a movement out of a parallel line



with the direction of feed communicated to them, and they consequently caused to cut in an inclined direction or line, instead of in a direct line, and thereby give the proper shape and taper to the shingle from tip to butt. (See figure.) *b b*, movable, and BBB, stationary saws.

Claim.—The machine for sawing shingles, arranged and operating as described in specification; the lateral movement of the saws being caused by means of grooved cams L M, which operate upon the pintle *j* of the sliding-bars N O, carrying the movable saws: the movement slightly out of a parallel line with the direction of feed being caused by means of the cams H I, which operate upon the pintle of the sliding-bars F G; the movement last mentioned causing the stuff to be cut tapering, or of any other required form.

No. 10,285.—CHARLES PHELPS, of Salem, Mass.—*Improvement for Supporting Table-Leaves.*—Patented November 29th, 1853.



When the short arm *a* of lever A is pressed back, the end of the longer arm of A will move towards *j*, and overcome the force of spring *j*; when depressed the catch *i* will leave the edge of piece *l*, and the leaf L of the table will be lowered. The lever A slides through opening in the piece *l j*.

Claim. The application to the falling leaf of tables of a hinged supporting-brace in the form of a bent lever, combined with a spring on the under side for throwing it upward into its catch, whereby the table-leaf can be conveniently released to let down, by a pull at the short arm of the bent lever.

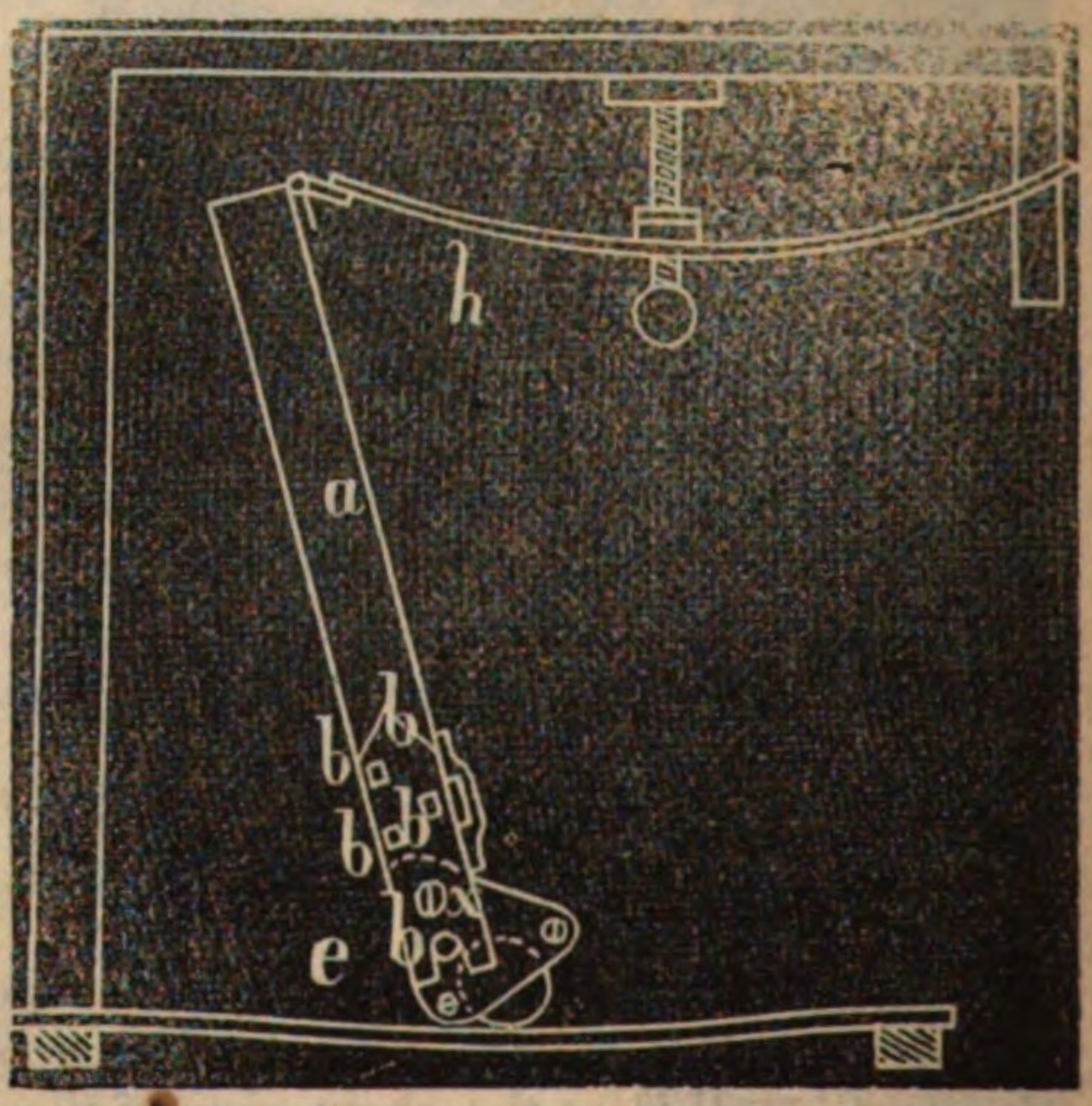
No. 10,286.—JOHN B. POAGUE, and WILLIAM F. POAGUE, of Fancy Hill, Va.—*Improvements in Moulds for making Hydraulic Cement Pipes.*—Patented November 29th, 1853.

The nature of this invention consists in forming the moulds of two side pieces, which are permanently lined with cloth or similar porous flexible material on their insides, and provided with air-openings, between which openings the cloth is tacked, or otherwise fastened to the moulds, so that when the moulds are opened at one end the cloth will strip or part from the pipe, the air-tubes or openings allowing the air to pass in between the cloth and pipe to facilitate the operation, and

thus leave the pipe in its green or undried state, in the precise spot where it was moulded. Also, in covering the mandrel with a bag made of cloth to fit it, the bag being made fast to one end of the mandrel, will turn inside out, and be withdrawn with the mandrel.

Claim.—In combination with the moulds permanently lined with cloth or other porous flexible material, the air-spaces intermediately placed between the fastenings of the cloth, so that it may *give* to the pipe, or mould, as it is stripped from the pipe. Also, the manner of withdrawing or stripping the cloth from the inside of the freshly formed pile, by attaching it to the end of the mandrel, so that in withdrawing the mandrel the cloth will turn inside out and strip from the pipe.

No. 10,287.—Frederick Seibert, of Williamsburgh, N. Y.—*Improved Machine for Dressing Morocco, or Polishing the same.*—Patented November 29th 1853.



This improvement consists in the employment of a glass cylinder rubber, together with the devices to which it is affixed. In the figure, *c* represents the glass cylinder rubber, on the pendulous arm or lever *a*, and supported by the plates *b*, one of which is adjustable at *b''*, to make the rubber work accurately upon the bed-piece; *h* is a spring.

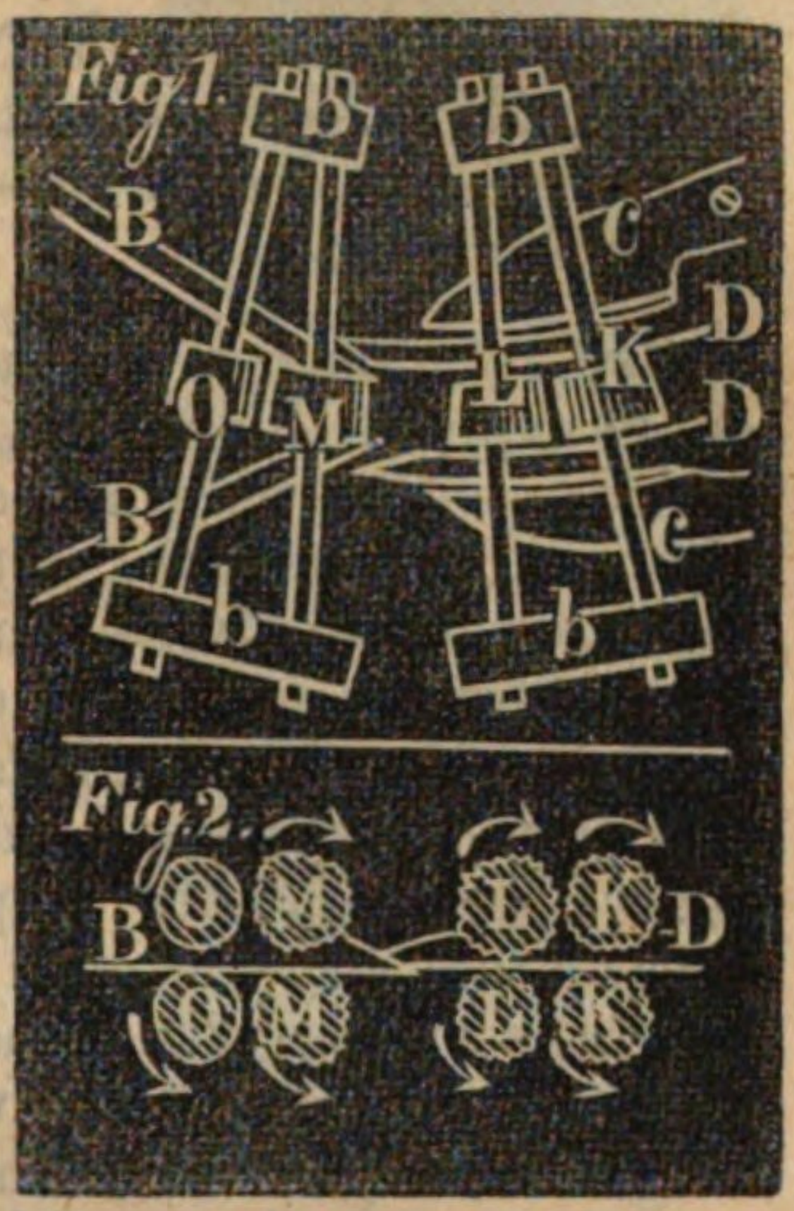
Claim.—The circular or curvilinear glass rubber, combined with giving it a tilting motion, for the purpose of enabling it, after passing off the edge of the leather at the end of the stroke, to roll back and mount upon the leather without scraping it up.

No. 10,288.—Samuel J. Trofatter and Charles H. Trofatter, of Salem, Mass.—*Improved Machine for Skiving Boot-Counters.*—Patented November 29th, 1853.

Figure 1 is a top view, and figure 2 a section of the apparatus; D D, spring-bearers fastened to the top of guides C C, the edge of one of which is convex, and the edge of the other concave; B B, knives to operate on both edges of the leather. The rollers K K′, L L′, M M′, and o o′, are conical frustra, the sides of which as well as their axles converge to one common centre, which is also the centre for the curva-

ture of the guides c c; the rollers are geared together; the three first pairs are fluted; K L M and o receive their downward pressure by means of springs acting upon the blocks *b*; K K′ and L L′ serve to keep the leather straight, and to advance it towards the knives; M M′ and o o′ operate as draft-rollers, o o′ at the same time serving to smooth the creases made in the leather by the preceding rollers.

Claim.—The arrangement of the axles of the pressure and draft rollers, in convergent lines, in combination with the curved guides, as applied to the knives, the whole being made to advance a curved piece of leather between the guides, without undue pressure against either, but with equality of pressure against the guides.



No. 10,289.—J. Heilmann, of France.—*Improvement in Machinery for Combing Wool and other Fibrous Substances.*—Patented November 29th, 1853.

The object of this invention is to remove from the wool, or other fibrous material, all the short fibres, and also all foreign substances which may be mingled therewith.

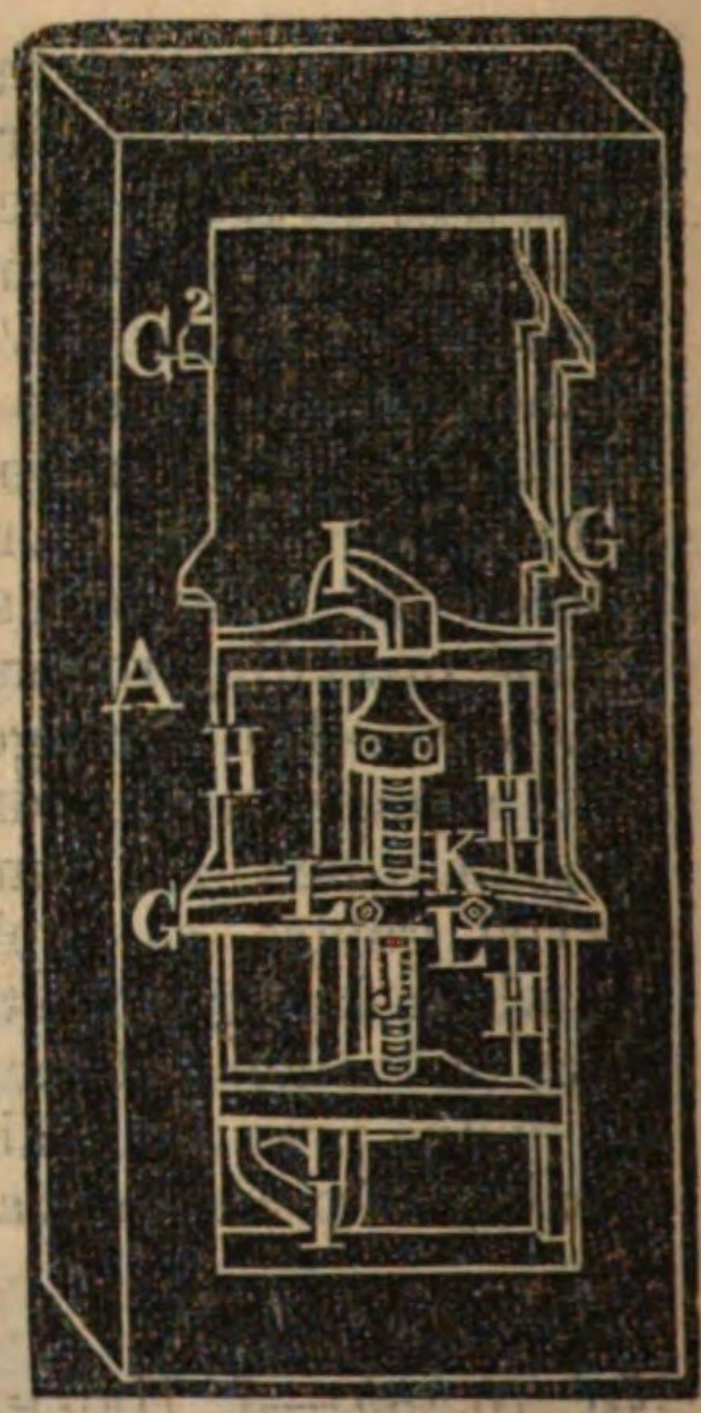
Claim.—The segment-drum, constructed and arranged substantially as described in the specification. Also, the jaws, for griping and presenting the wool properly to the combs to be combed, and in connection therewith the bars and comb for delivering the wool. Also, the rollers, or their equivalent, for seizing and retaining the wool as it is combed, and forming it into a continuous sliver, substantially as specified.

No. 10,290.—William Baird, of Philadelphia, Pa.—*Improvement in Power-Looms.*—Patented November 29th, 1853.

The nature of this invention consists in an arrangement for immediately arresting the forward motion of the lay of a loom when a picker-strap breaks, which arrangement at the same time will stop the motion of the loom. F is a plate secured to the breast-beam by means of a screw; and when the picker-strap breaks, the picker-stick strikes the strap B, and withdraws the pin G from the loop in the rod D; the spring E then instantly acts upon plate F, and draws it over the palm of the breast-beam lever, where it is stopped by a pin: this prevents the lathe from coming forward so that it can strike the shuttle, and at the same time shifts the belt on to the loose pulley.

Claim.—The arrangement of the plate F with its spring, link, staple, and pin, arranged and operating in the manner and for the purpose described.

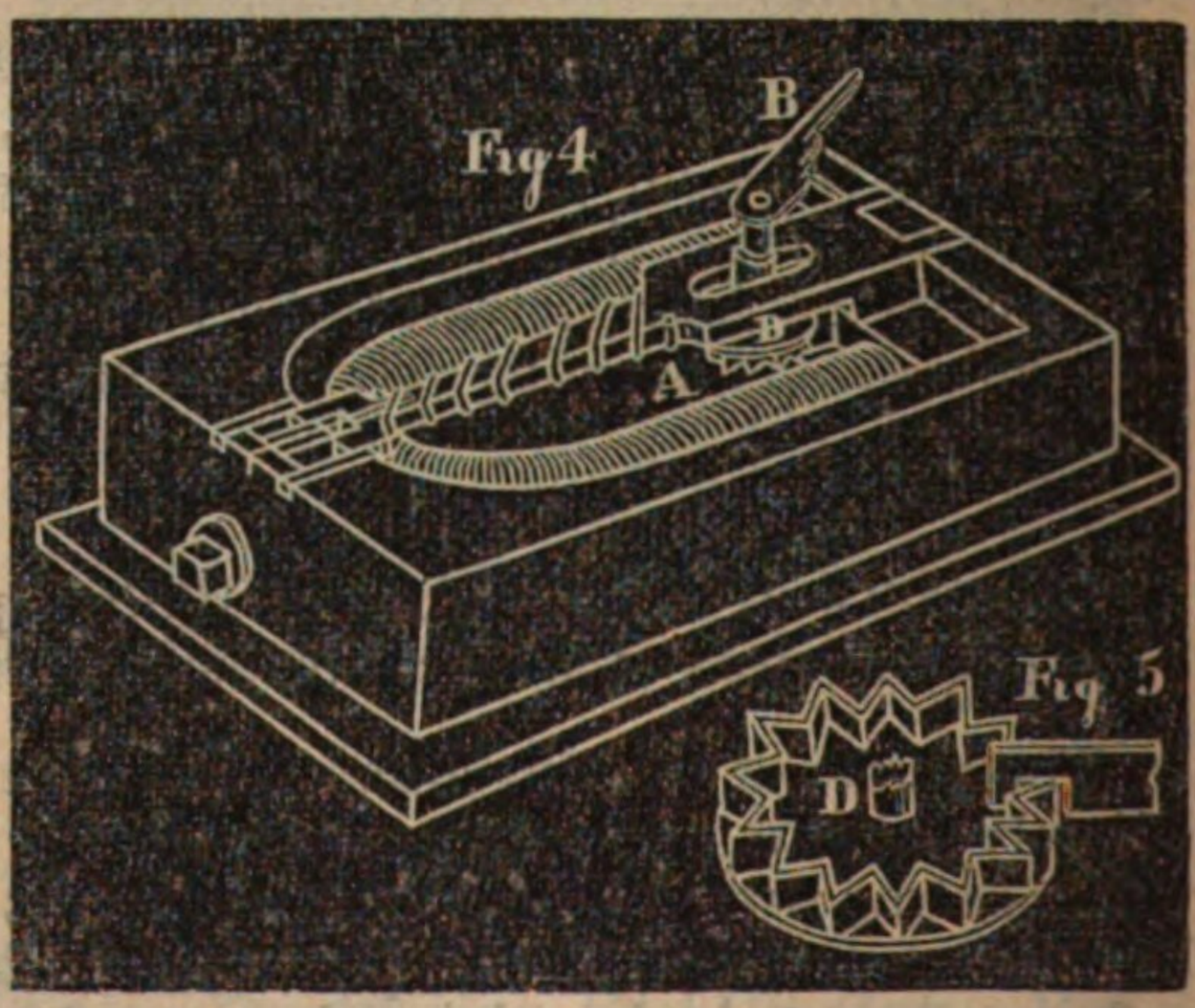
No. 10,291.—Frederick Nicholson, of Warsaw, N. Y.—*Improvement in Screw-Jacks for raising Buildings.*—Patented November 29th, 1853.



(By reference to the annexed figure, the claim explains this improvement.)

Claim.—The peculiar combination and employment of the hook I, the lifting-frame H, the screw J, the divided nuts K, and the supporting-frame A; their combination being such that by the alternate employment of a pair of divided nuts K, held stationary in transverse notches G of the supporting-frame A, the screw J may be continued up to any desired height, carrying with it the lifting-frame H, in which it is confined, and which slides in the longitudinal grooves of the supporting-frame A, and carries along with itself the hook I, substantially as described in the specification.

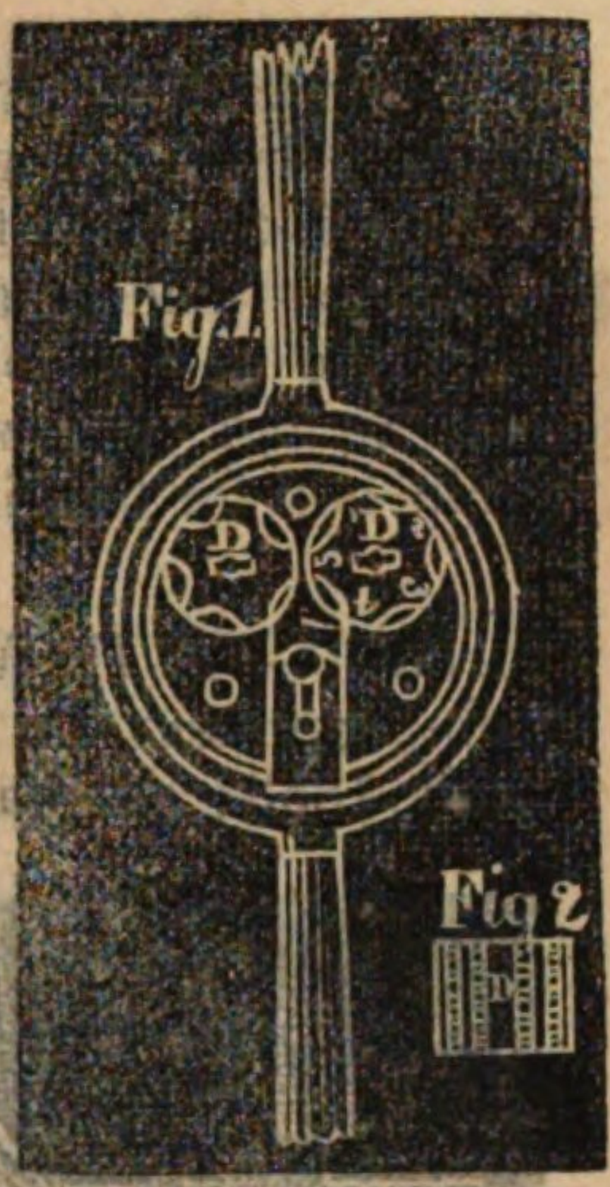
No. 10,292.—John Davis, of New Bedford, Mass.—*Improvement in Operating the Electro-Magnetic Telegraph.*—Patented Dec. 6th, 1853.



There is a circular index above the working parts shown in fig. 4, concentric with the axis D, provided with a hand or pointer B. A is the electro-magnet, the armature of which is provided with a slide C, and carrying a notched stud or "impeller" E (fig. 5); this notched impeller embraces the inclined-planes of the zig-zag wheel D, and, by its alternate action upon those inclined-planes, moves the pointer to indicate certain letters or numerals of the index.

Claim.—The improvement which consists in operating the electro-magnetic telegraph, by means of the index or escape-wheel, slider, and impeller, as set forth in the specification, and thereby spelling intelligence by pointing out the letters composing the words of the communication, on a similar contrivance at the distant office to which the intelligence is sent by telegraph.

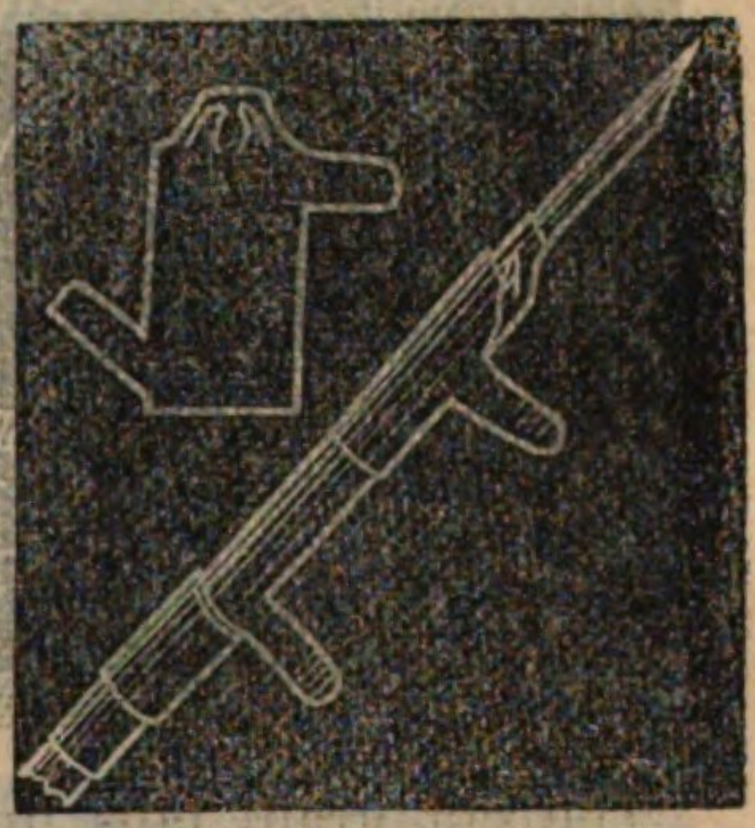
No. 10,293.—Simeon Goodfellow, of New Orleans, La.—*Improvement in Stocks and Dies for Cutting Bolts and Screws.*—Patented Dec. 6th, 1853.



The dies and cutters are circular, and graduated to different sizes, as indicated by the numbers 1, 2, 3, 4, &c. Fig. 1 represents a top view of the stock and dies, and fig. 2 a side view of one of the dies. The dies D D are tapered from their upper surfaces downwards.

Claim.—The arrangement of the circular dies, having threaded scores or recesses in their peripheries of various depths or sizes in the die-stock.

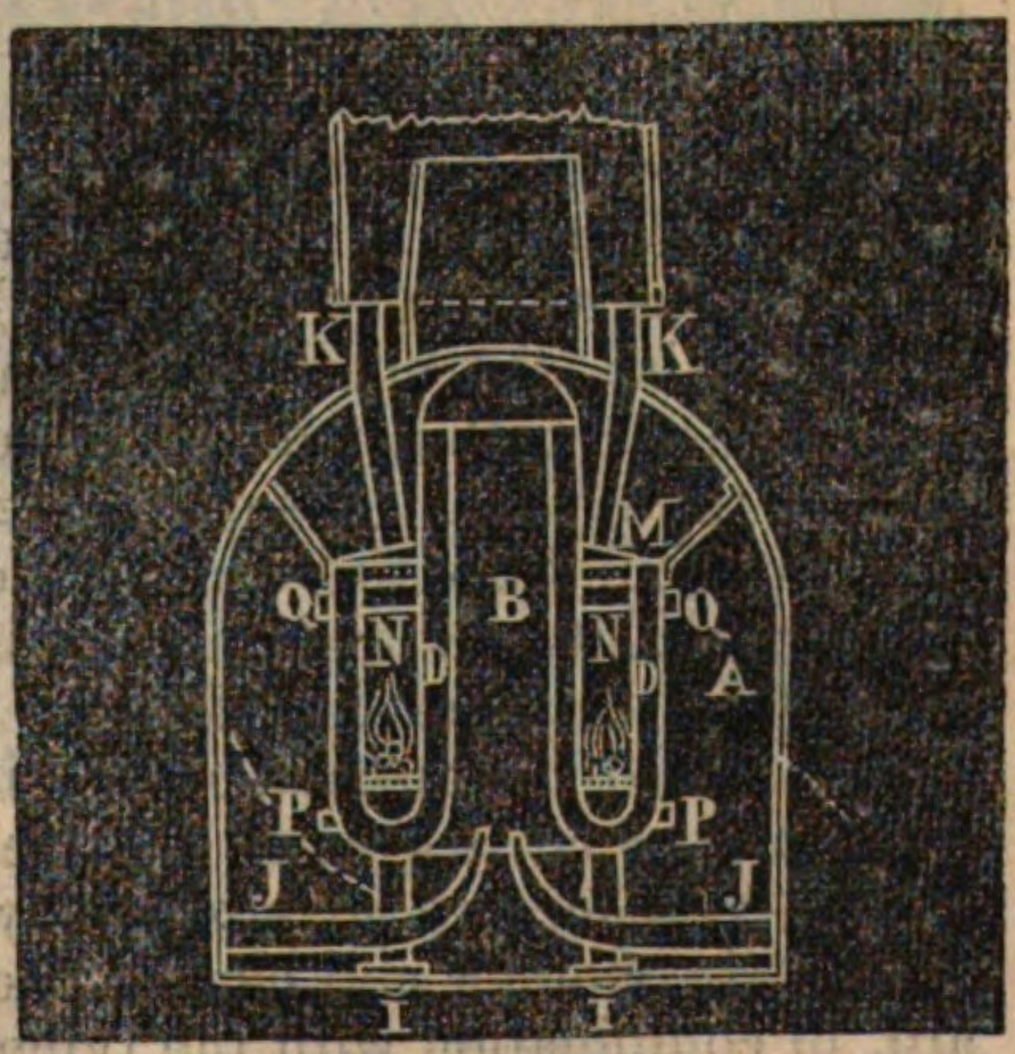
No. 10,294.—Ebenezer W. Hanson, of Spring Garden, Pa.—*Improvement in Pen-Holders.*—Patented Dec. 6th, 1853.



By reference to the figure the claim explains this improvement.

Claim.—The peculiar construction and application of the thumb and finger rests to pen-holders; viz., making the projecting part of the thumb and finger rests of an oblong or parallelogramic form, so that they shall cross the thumb and finger respectively when held for use, whether the rest be fixed or made adjustable.

No. 10,295.—David Matthew, of Philadelphia, Pa.—*Spark-burners and Feed-water Heaters.*—Patented Dec. 6th, 1853.

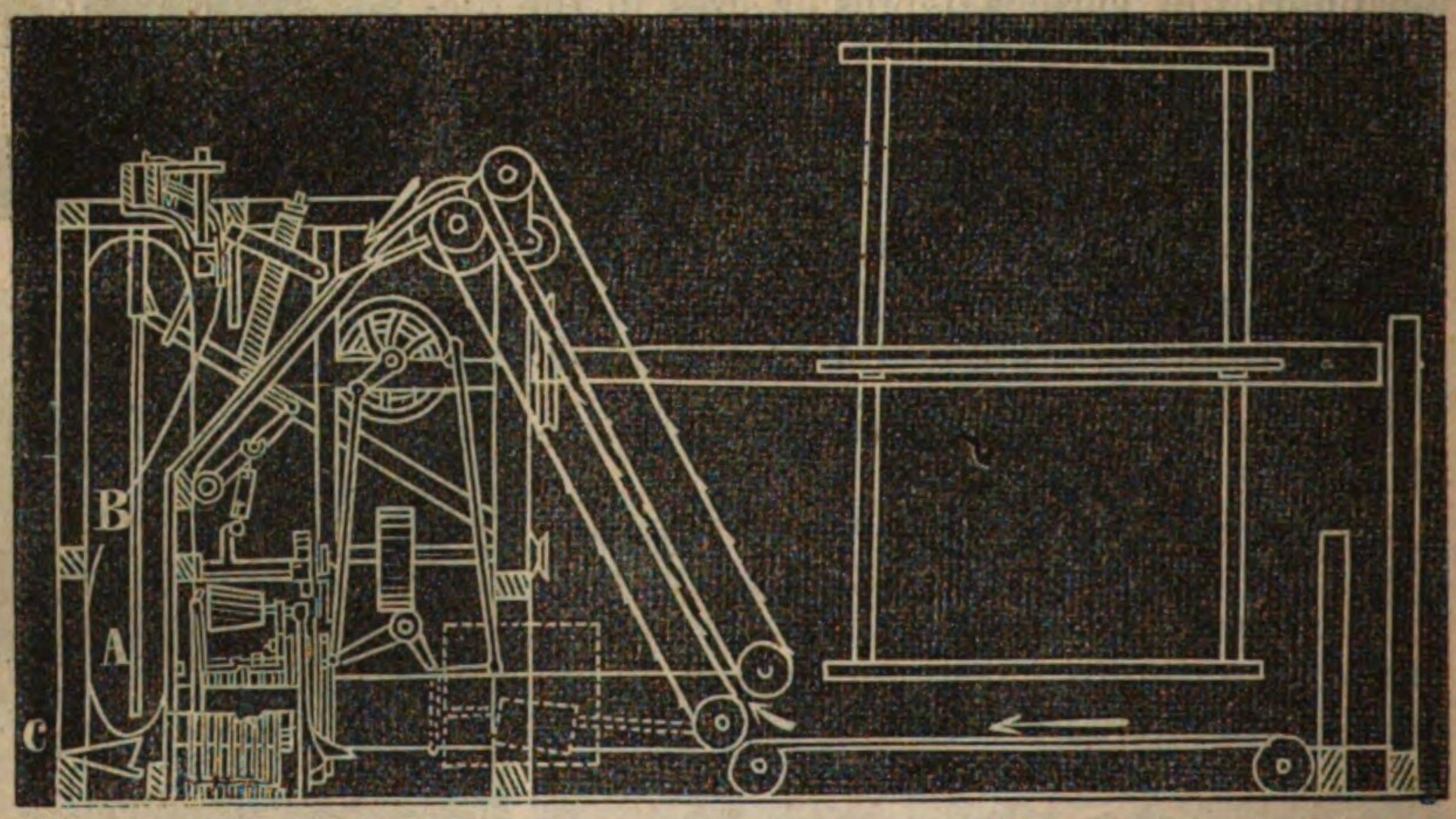


The nature of this invention consists in constructing and providing the engine of locomotives with an apparatus which receives and consumes the sparks, presents an inner water-surface to their fire, an outer and also central water-surface to the heat from the flues of the boiler, and heats the feed-water in a reservoir or space between these water-surfaces, for supplying the boiler; by which the sparks are saved and made to aid in generating steam. (See fig.) A is the boiler; B, the apparatus; C, the spark-furnace; D D, feed-

water spaces; J J are the pipes for the conveyance of the exhaust-steam to draw the sparks from the spark-catcher to the furnace; I I are the air-pipes of the furnace, which also serve to support the apparatus.

Claim.—The arrangement and application of the two concentric pipes, the curved plate-rings, the pipes I I I, the furnace-grate H, the cover M, and pipes K P Q and N, forming a combined apparatus in the smoke-box for burning the sparks and heating the feed-water.

No. 9,930.—P. H. WATSON and E. S. RENWICK, of Washington, D. C.—*Improvement in Grain-Harvesters and Binders.*—Patented Dec. 6th, 1853; antedated June 6th, 1853.



The cut grain falls upon a revolving apron, and is carried by the apron off at the side into a receptacle, where it is separated and bound into sheaves with a cord, and discharged by means of a complicated arrangement of mechanism, somewhat analogous to that employed in net machinery. The annexed figure shows a vertical cross-section of the machine, in which the course of the grain is indicated by the arrows.

Claim.—The combination of a continuously-acting rake with a binding mechanism. Also the method of compressing the loose grain into sheaves, vertically instead of horizontally. Also, the shifting conveyor. Also, the combination in a grain-harvester of two series of bands, one or both armed with teeth for carrying the grain from the rake to the binder. Also, the combination of a shifting stripper with a conveyor. Also, the combination of the discharging gate with the receiving platform and the binding crib. Also, the travelling cord-nippers. Also, the combination of the cord-clamp with the cord-feeder. Also, the method of drawing the binding-cord round the sheaf with the proper degree of tightness. Also, the traversing movement of the tying-forceps in alternately opposite directions, in combination with their opening and closing movement. Also, the pronged standard, in combination with the tying-forceps and the finger. Also, the method of rendering slack-cord to facilitate the tying of the band.

Also, the arrangement of the cord-nippers upon a sliding-stock. Also, the retarding of the cord by means of a break. Also, the arrangement of the sides and bottom of the binding-crib so that it can be depressed to permit the discharge of the sheaf. Also, the arrangement of the cutting and binding mechanism on opposite sides of the driving-wheel.

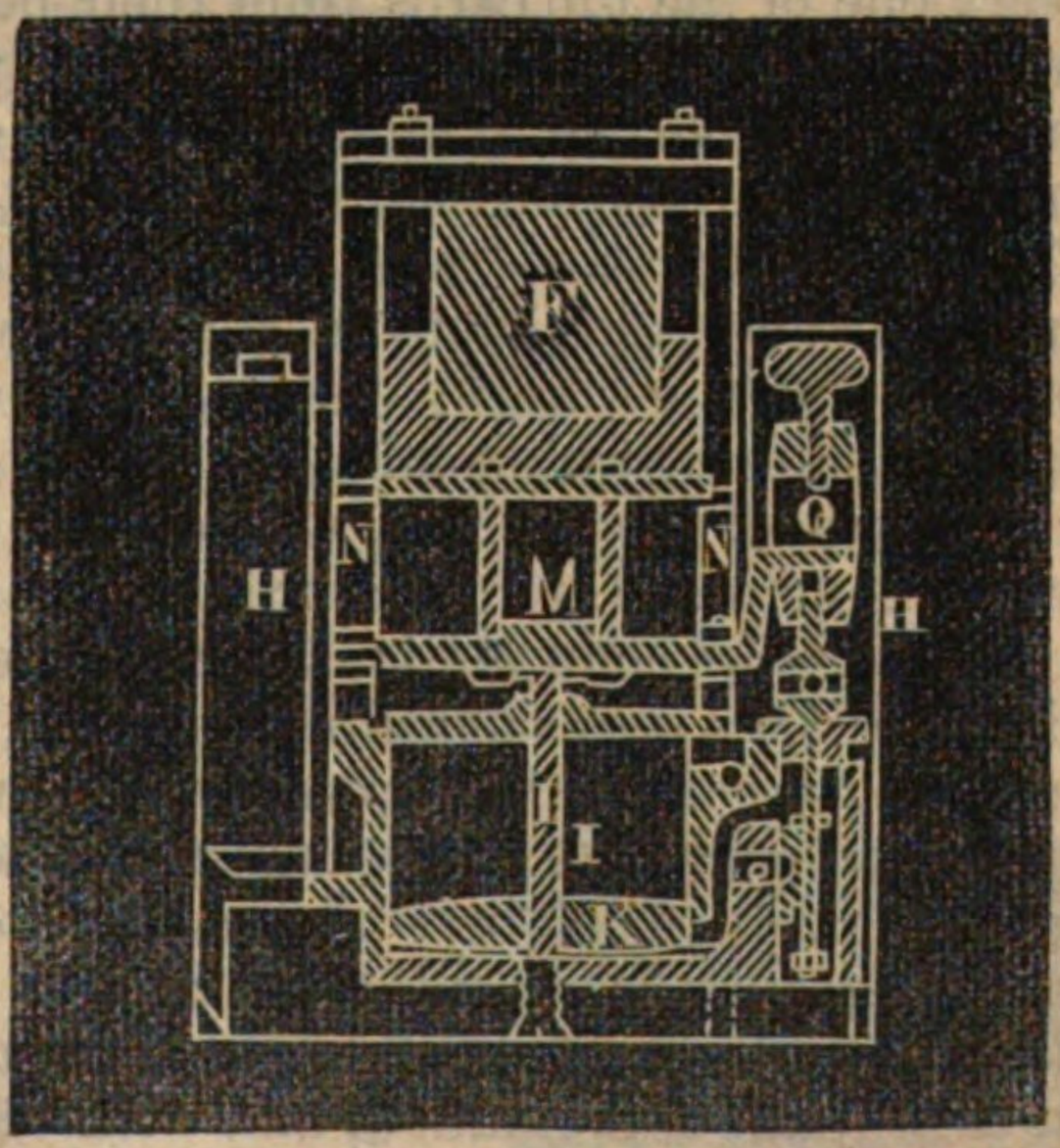
No. 10,296.—Ira F. Payson, of New York, N. Y.—*Improvement in the Manufacture of Soap.*—Patented Dec. 6th, 1853.

The nature of this invention consists in the employment of sal ammoniac in the manufacture of soap, in combination, in part or in whole, with wheat-flour, potatoes, borax, sal soda, "Meen Fun," or satin-white, and fullers' earth, or their equivalents; the combination being a soap which maintains its consistency in all states of the atmosphere, and which will wash in water, hard or soft. The parts are, 3 gallons of water (heated to nearly the boiling point); 50 lbs. Meen Fun, or satin-white; 100 lbs. fullers' soap; 25 lbs. pulverized potatoes; 2 lbs. sal soda, finely pulverized; half a pound of sal ammoniac; 2 lbs. wheat flour, made into a thin paste; half a pound of finely pulverized borax. Stir for 25 minutes over a gentle fire.

Claim.—The use of sal ammoniac, in combination with the other ingredients.

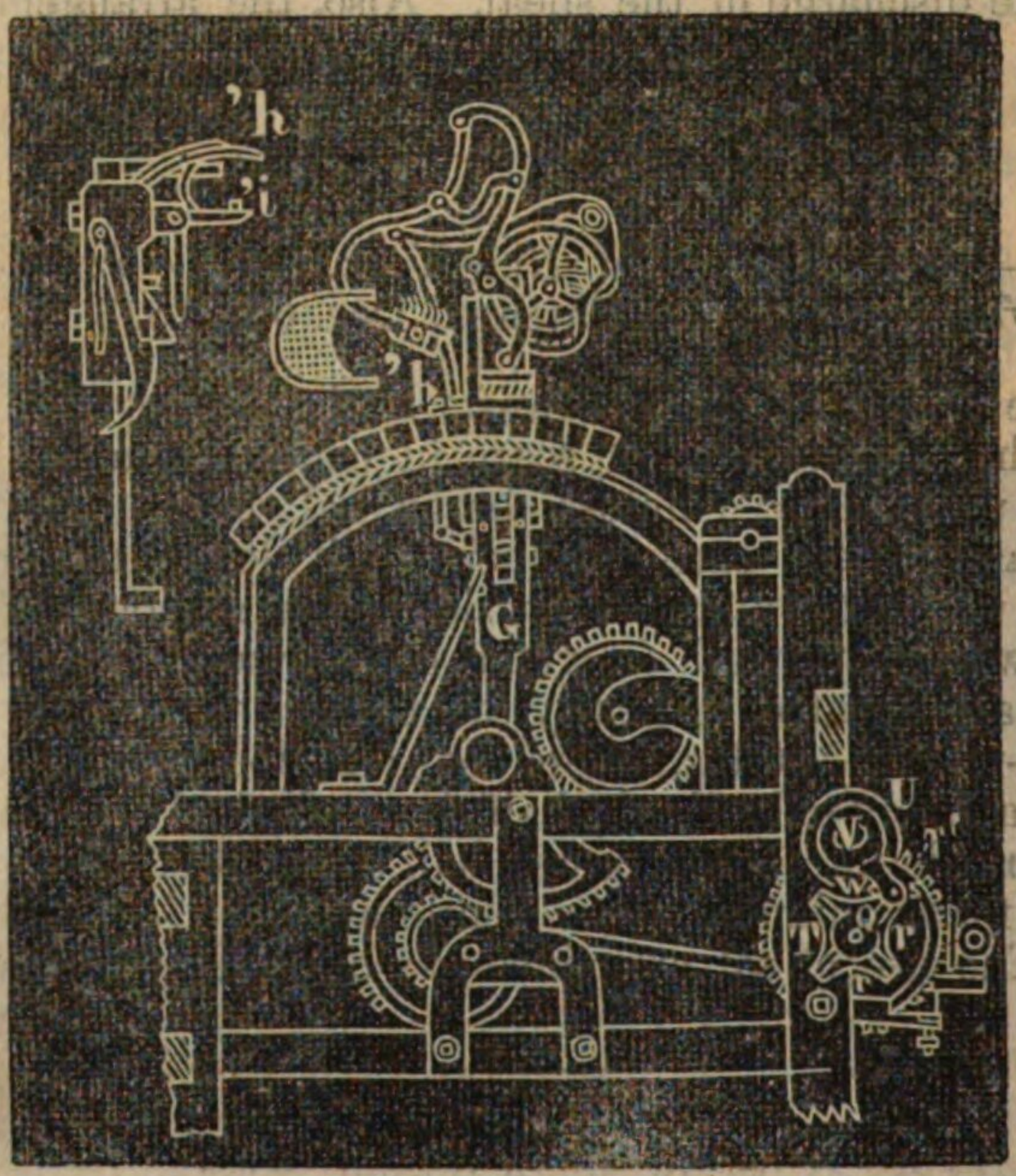
No. 10,297.—James Watt, of South Boston, Mass.—*Improvement in Steam-Hammers.*—Patented Dec. 6th, 1853.

The object of this invention is to regulate the force of the blow of the hammer at pleasure, or suspend the hammer above the anvil.



Claim. — The revolving valve-rod, the barrel *g*, and the adjustable screw-stop *l*, constructed, arranged, and operating as described (in the specification), by which steam may be admitted beneath the piston during any portion of the fall of the hammer, without altering the effective force and length of the stroke. Also, in connection with the above, the arrangement for throttling the steam on its way from beneath the piston; by which means the intensity of the blow may be regulated to any degree of nicety, or the hammer be held suspended above the anvil, in the manner and for the purpose set forth.

No. 10,298.—GEORGE WELLMAN, of Lowell, Mass.—*Improvement in Carding-Engines.*—Patented Dec. 6th, 1853.

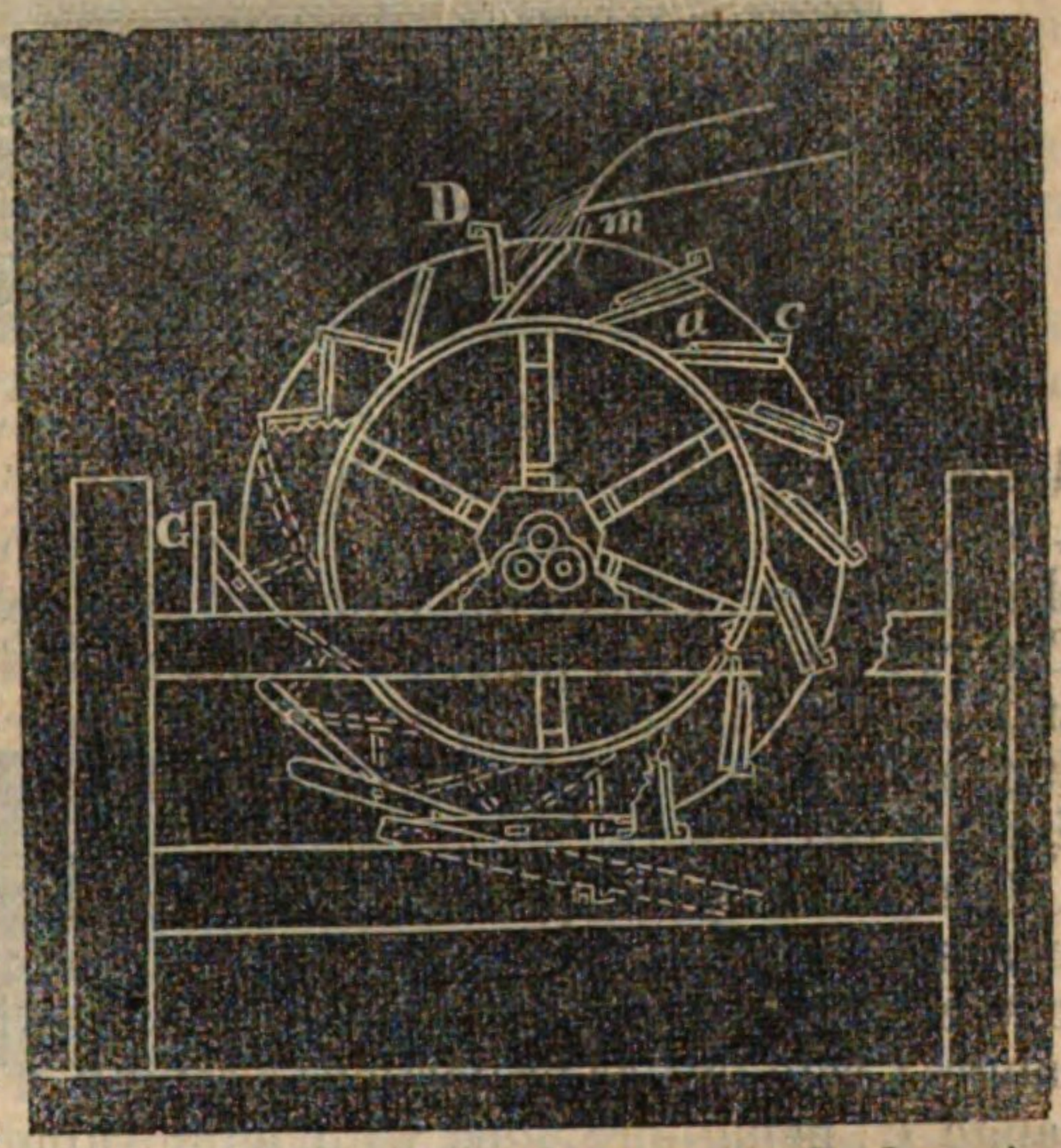


The object of this invention is to effect the elevation of each and every one of the top cards from their beds, or the frame on which they are supported; the cleansing of these top cards; and their return to their respective beds after being so cleansed: thus producing by mechanism what has heretofore been accomplished by hand labor. The figure represents a side elevation of the machine, in which the main card-cylinder, doffers, &c., are not shown. T is the block; W, the arm; U, the wheel; Q and V, shafts; G is the frame which carries the mechanism, which takes hold of both ends of a top card and lifts it upwards above the rest, where it is held until cleansed by a brush, which is actuated by appropriate mechanism.

Claim.—In combination with a series of top cards of a carding engine, not only a mechanism for raising one or more of such top cards, and holding the same upwards, and afterwards depressing the same back into place, but a mechanism for acting on and cleansing such top card or cards, when or while so elevated; not meaning to claim the mechanism for moving the top card or cards, or that for cleansing it or them in their separate combination with the series of top cards, but both in their joint combination, and with the series of top cards. Also, in combination with the series of top cards, and mechanism for raising and cleansing a top card and restoring it to its seat, the mechanism for moving the raising and cleansing mechanism in succession from one top card to the other, and whether from one card to the next one throughout the series, or from one to another of them to the next but one, or in any

other order. Also, the combination of the grooved block T, the arm W, with its stud *s*, and the notched wheel U, as applied to the shafts Q and V, and made to operate together.

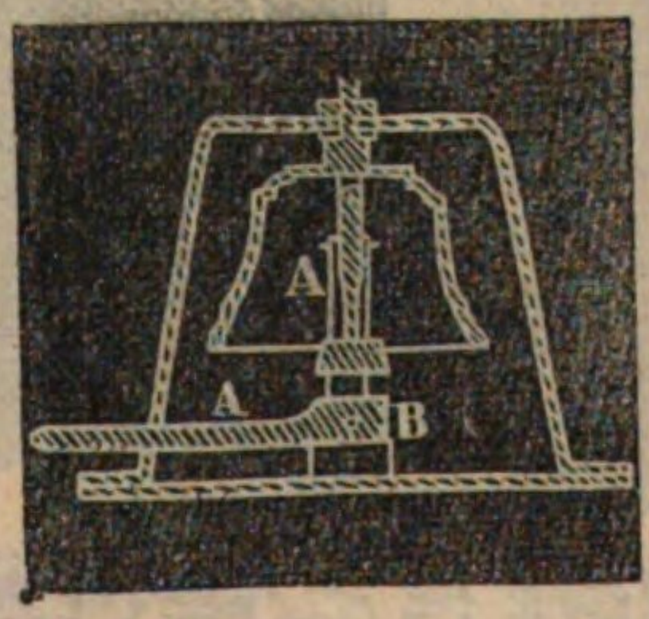
No. 10,299.—JOHN E. WHITEMORE, of Joilet, Ill.—*Improvement in Overshot Water-wheels.*—Patented Dec. 6th, 1853.



This improvement consists in so constructing the buckets, that after receiving the impulsion of the water they are closed by its action, and the covers fastened down by means of springs and levers on the face of the wheel, which latter, by striking an exterior cam, throw forward the bolt-rods connected with them, permitting the catches of the covers to descend, when the spring beneath the lever draws the bolt into the catch and secures the cover, thus confining the water and allowing its weight to act until the bottom of the wheel is reached, when another cam, striking the lever attached to the bolt-rod, releases the catch from the bolt, and permits the confined water to throw open the door and fall from the wheel, contributing, by its reactive power on leaving the bucket, to the propulsion of the wheel. The cover hangs loose during the remainder of its revolution, and presents an open bucket to the action of the water.

Claim.—The construction of the buckets, with the covers D, operating substantially as described. Also, the levers *d*, springs F, and bolt-rods, in combination with the cams G and P, or their equivalents, for closing and opening the buckets, in the manner and for the purposes set forth.

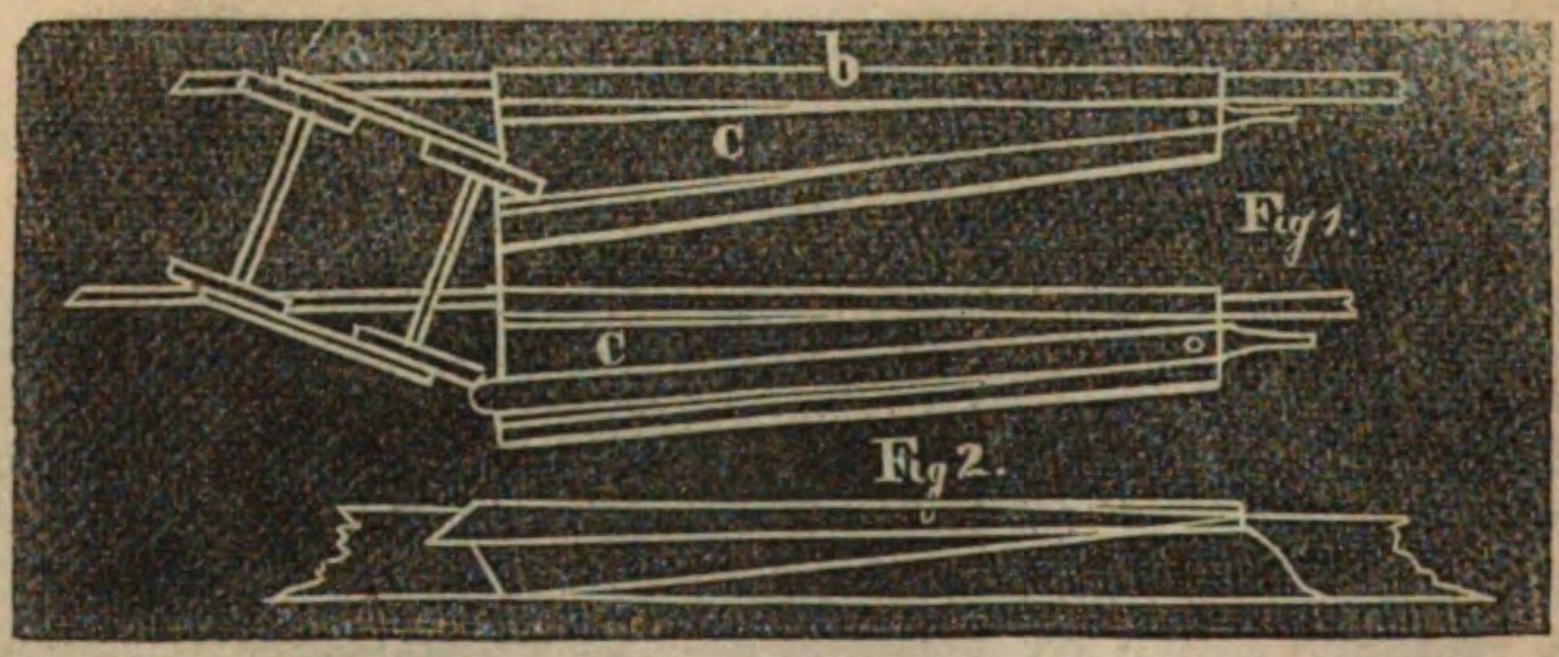
No. 10,300.—ALFRED CARSON, of New York, N. Y.—*Improvement in the Mode of Ringing fixed Bells.*—Patented Dec. 6th, 1853.



This invention consists in a device for operating the clapper of a bell, by means of a lever that turns on a centre below, and is connected with the arm of the clapper by means of a slotted swivel near the upper part thereof. (See fig.) A A is the elbow lever, having its fulcrum at B.

Claim.—The device herein described, as applied to the working of the clapper of a bell hung in the usual manner, as set forth

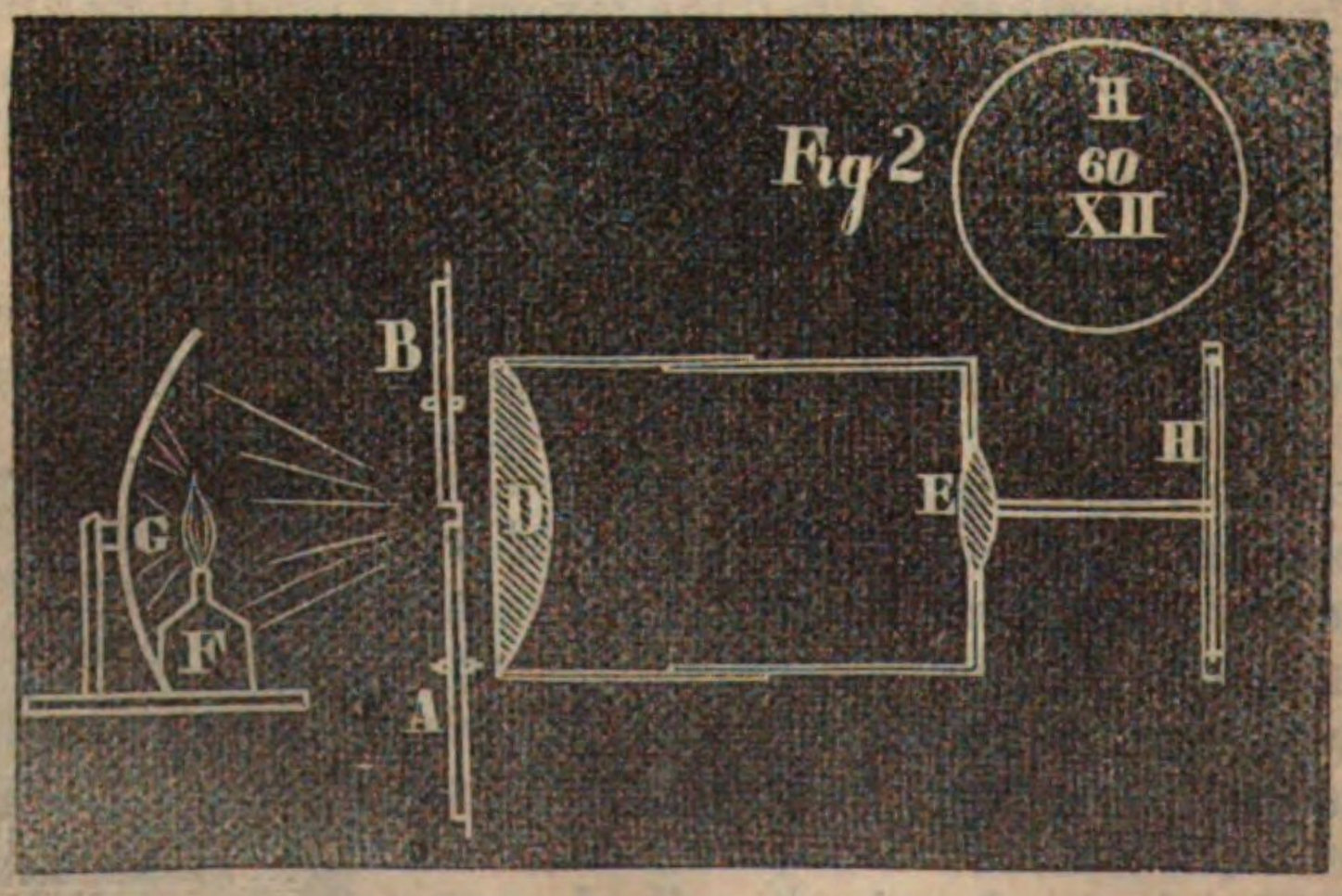
No. 10,301.—Lucian B. Flanders, of Dunkirk, N. Y.—*Improvement in Apparatus for Replacing Cars upon the Track of Railroads.*—Patented Dec. 6th, 1853.



This apparatus consists of two flanges with inclined bottoms; the flanges being fitted to the rails, and one of them being provided with a movable guide, which, as the car is moved forward and up the inclined flanges, guides the truck to its proper position upon the rails. The two flanges are placed opposite to each other, one upon each rail, and adjusted to the rails, so that the lower ends of the bottoms of the flanges will be in contact with the wheels that are off the track. (See figure.)

Claim.—Replacing railroad cars and locomotives upon the track, by means of flanges c c′, having inclined bottoms, and secured or attached to the rails, when used, by lips or projections *b* on the sides of the flanges; said lips or projections clasping or fitting over the rails. The flange c′ being provided with a movable guide E, which directs or guides the wheels upon the rails; and which guide, by being movable, will act upon the wheels, the flange c′ being adjusted to either side of the rails.

No. 10,302.—James Glenn, of New York, N. Y.—*Improvement in Time Indicators.*—Patented December 6th, 1853.

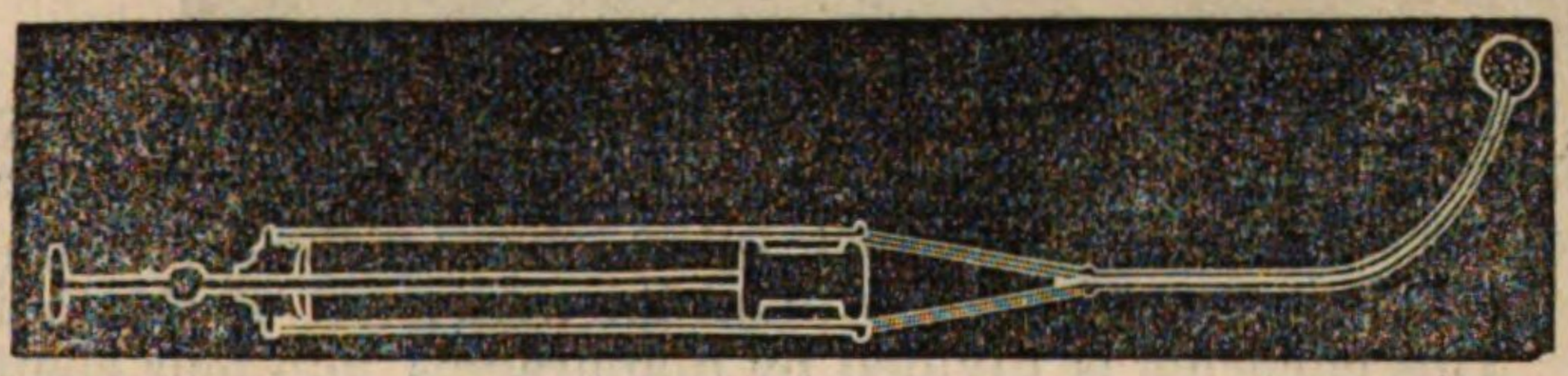


The nature of this invention consists in making two circular brass plates A B (see figs.), having the figures of time cut through them—one

having the hour figures, and the other having the minute figures. These plates are made to revolve by clock-work, between the light of a lamp and two magnifying lenses, which throw the images of two divisions of the minute figures, and one division of the hour figures, on a screen or plate of ground glass placed in front. The figures are thus represented *in light* for the purpose of being more readily seen than in other methods now in use. Figure 2 represents a front view of the ground glass. G is the reflector; D and E are the lenses; H, the ground glass, also shown at fig. 2.

Claim.—The construction of two circular dial-plates, arranged and operating as described, in connection with the other parts, by means of which the time is represented in *white light* figures, which may be seen to a greater distance, and more distinctly than by any other method at present in use, whether used with or without a magnifying lens.

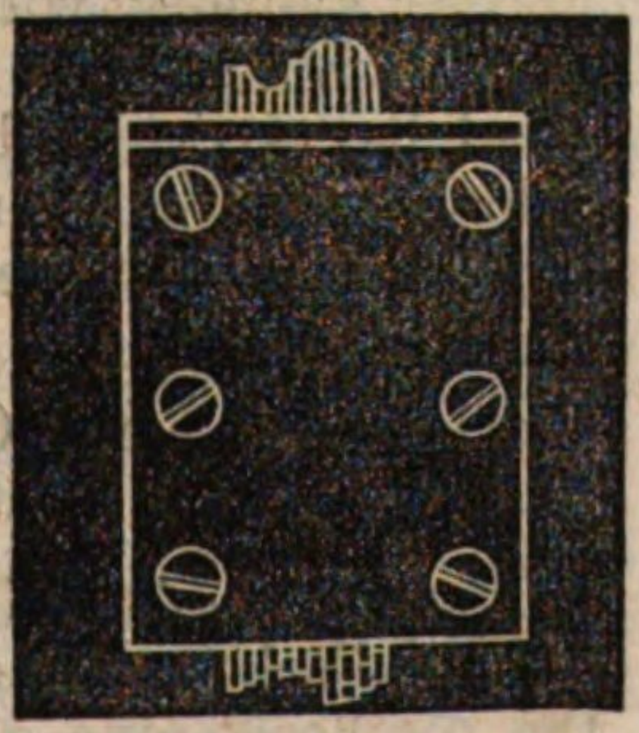
No. 10,303.—IRA WARREN, of Boston, Mass.—*Improved Surgical Syringe.*—Patented December 6th, 1853.



The object of this invention is to eject suitable solutions to diseased parts of the throat and nose, in place of using the sponge, as heretofore. The syringe is of the usual form, to which is attached a pipe that may be bent, or straight, as may be required, at the end of which is a small hollow globe, full of fine holes, through which the solution is ejected.

Claim.—The syringe, as above described, constructed of the form and of the materials described, for the purposes set forth.

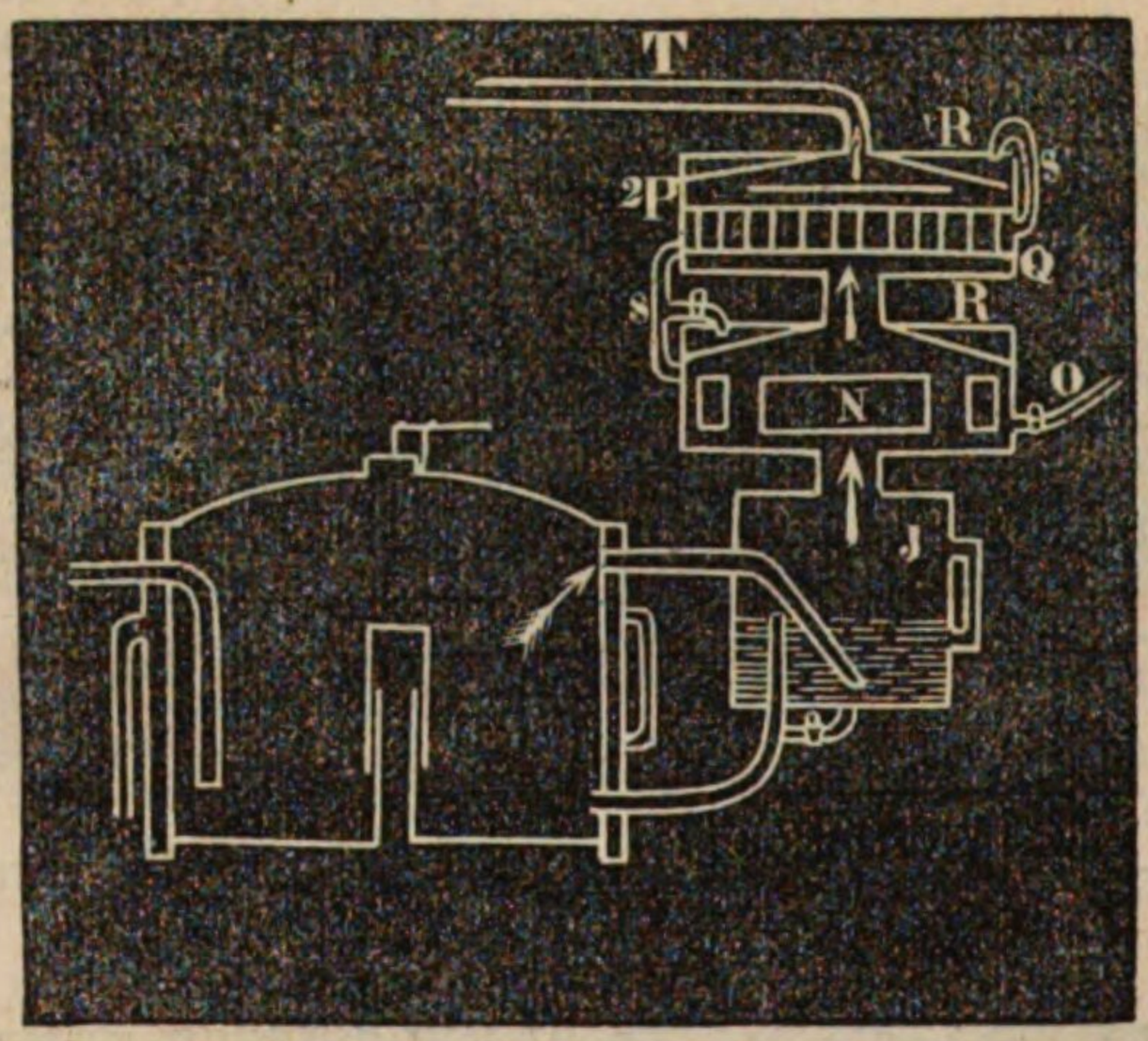
No. 10,304.—R. M. EVANS, of Gilford, N. H.—*Improvement in Irons for Planing Mouldings, &c.*—Patented December 6th, 1853.



The object of this improvement is to furnish a plane which, by changing its irons, will produce any kind of moulding desired. The irons are made in small sections or types, so as to be conveniently adjusted to the shape of any given pattern. When so adjusted, they are fastened in the clamp (see fig.), and an exact edge is obtained by grinding or filing.

Claim.—Making the cutting-irons of moulding-planes or turning-tools of thin sections, in the manner described, which, after being set to a pattern, and confined in a clamp, may be brought to an exact edge by filing or grinding.

No. 10,305.—Carl E. Werner, of Newcastle, Ill—*Improved Distilling Apparatus.*—Patented December 6th, 1853.



The object of this apparatus is to condense and, with facility, to eliminate spirit of any determinate strength, and consists of a cucurbit, of cylindrical form, surrounded by a steam-jacket, which imparts the required degree of heat, without the admission of steam into the beer. This cucurbit is divided by diaphragms into four chambers of equal height. The chamber N (see figure) communicates with a water-tank by a pipe O passing across the intervening water-space, by which it is kept constantly full; the chamber N, also, is divided by two or more upright tubes P P, which pass through it, and are secured to each of its heads, and strengthen it against the hydrostatic pressure, and also afford additional condensing surface. The upper chamber Q has a greater number of tubes P^2 P^2 for the passage of vapor. These tubes, or chambers, are extended above the head so as to form a trough R R. The arrows show the direction of the vapor in its passage through the neck T, which conducts it to the beer-heater, and thence to a worm in a refrigerator, from whence it is discharged in the form of spirits.

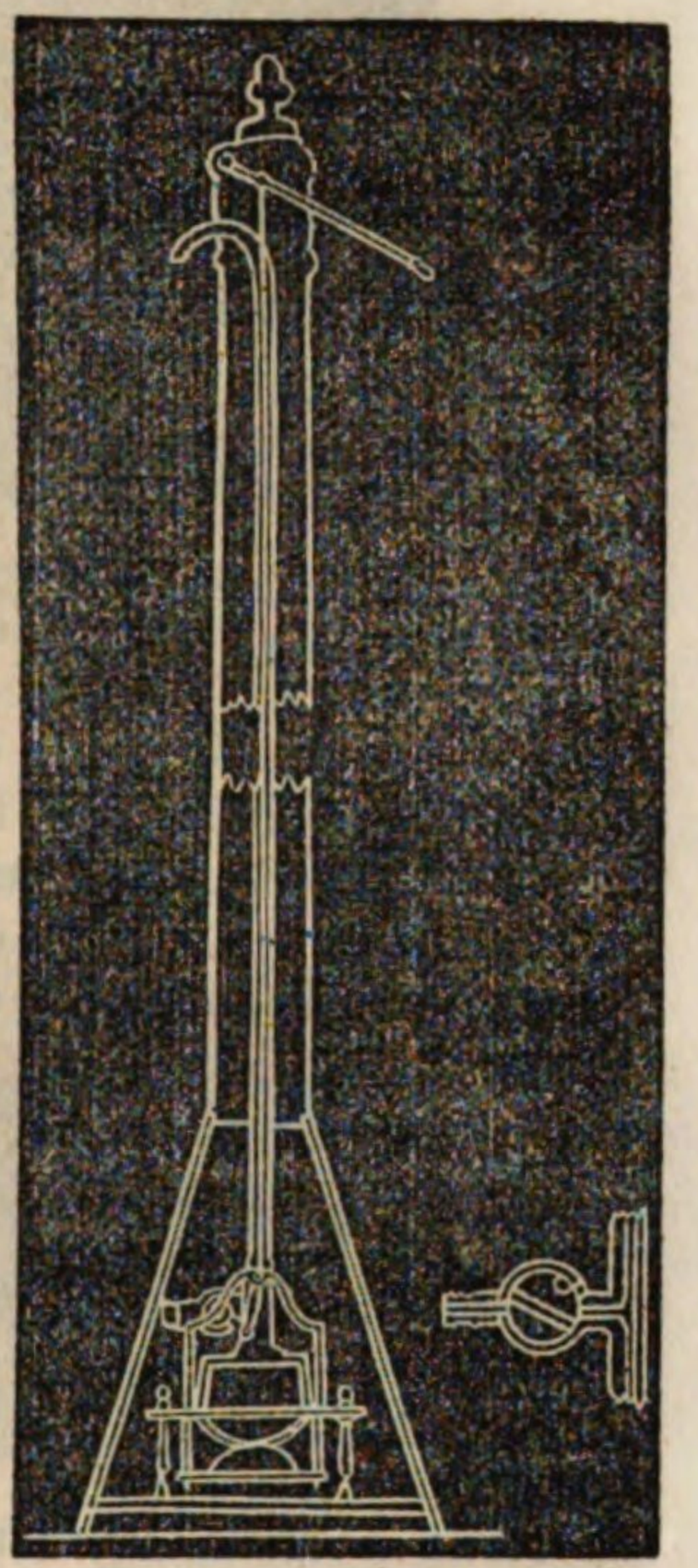
Claim.—The construction of the condenser, consisting of an outer upright cylinder, with its upper chime projecting above the head, so as to form a circular trough, and an inner refrigerating cylinder, traversed by vertical tubes, which connect the vapor spaces above and below; the whole being situated above, and discharging the condensed fluid back into the rectifier.

No. 10,306.—James Cochrane, of New York, N. Y.—*Improvement in Hydrants.*—Patented December 13th, 1853.

The object of this improvement is to prevent the water from freezing in the discharge-pipe of the hydrant, and consists in combining with the discharge-pipe a contracting and expanding chamber, which is expanded when the main valve of the hydrant is being closed by the ordinary waste-water running or falling therein from the dis-

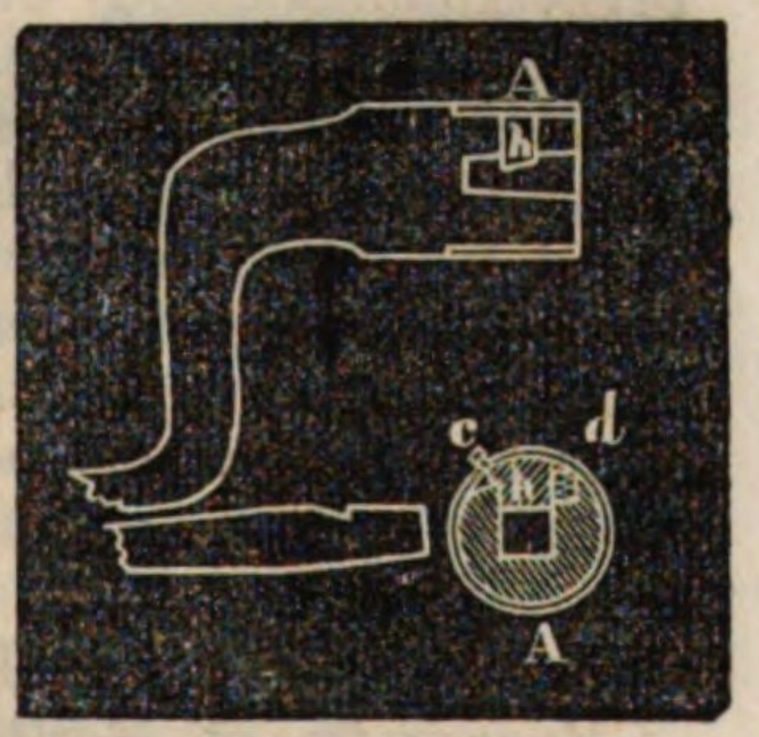
charge-pipe to protect it from the frost, and contracted or emptied before or at the time the main valve or cock is opened to force the water back into the discharge-pipe. By this means the water is kept out of the discharge-pipe.

Claim.—Combining with the issuing-pipe and main-cock, or two-way cock, flat or conical valve, and leakage waste-way, a piston and chamber, or a partly flexible chamber, emptying into and receiving from the issuing-pipe water between the interval of opening and closing the main and leakage waste-way. Also, the shutting force by hydrostatic pressure and gravity of the ordinary waste water; also, the general arrangement of the moving parts by their gravity to favor the shutting force, substantially such as herein described and set forth.



No. 10,307.—John Comstock, of New London, Conn.—*Improvement in Bit-Stocks of Braces.*—Patented December 13th, 1853.

The nature of this invention consists in the manner of operating the catch which holds the bit or tool in the stock. After inserting the bit, with its notch towards the catch *h* (see figure), the ring A is turned so that the point of the screw *c* will ride upon the back of catch *h*, and force the catch into the notch of the bit. To remove the bit, turn the ring back; and as soon as the end of the screw is off of the catch, the helical spring will push the catch out of the notch.

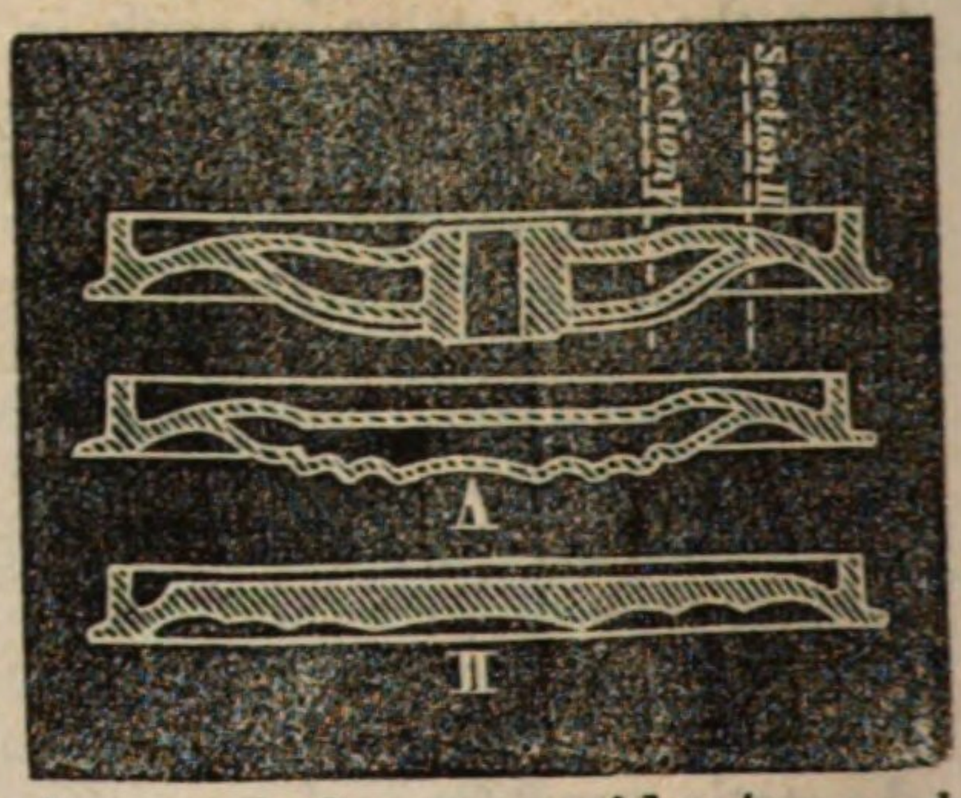


Claim.—The arrangement of the ring A, with its pin or screw *c*, in combination with the eccentric-shaped back-catch *h* and the helical spring *d*, the whole being combined and arranged substantially as set forth.

No. 10,308.—Norman Cook, of New York, N. Y.—*Improvement in Umbrella Coverings.*—Patented December 13th, 1853.

Claim.—The application of a dilute solution of india-rubber paste, or cement, to cotton or gingham umbrella coverings; for the purpose of enveloping the fibre of the cloth, and setting the color of the same, without adding to the weight of the umbrella.

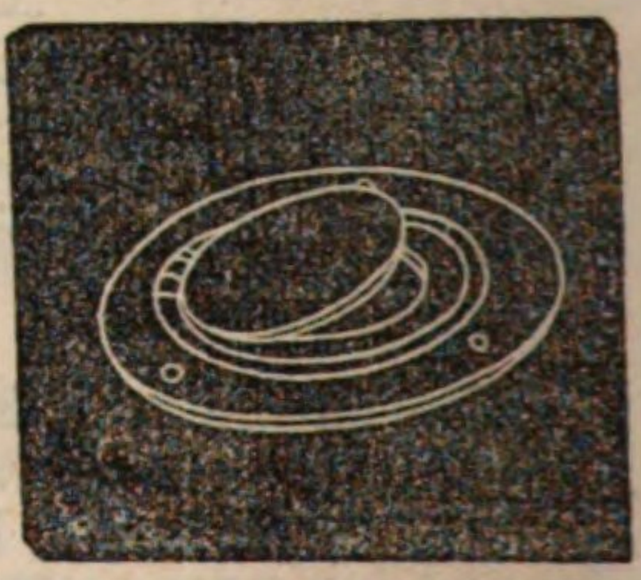
No. 10,309.—Carmi Hart, of Bridgeport, Conn.—*Improvement in Cast-Iron Railroad Car-Wheels.*—Patented December 13th, 1853.



By reference to the accompanying figures, the claim will explain this improvement.

Claim.—The arrangement of the plates of the wheel in the arch at the hub, so that its opposite sides curve in similar curves, adapting themselves to each other, and are also ogees; and whose continuation from the apex or point of union is also an ogee to the rim, in combination with the spokes or radii, which are ogees on the surface of the inner plate, and also ogees sidewise, and forms a continuous part of the inside plate itself.

No. 10,310.—Joseph Nock, of Philadelphia, Pa.—*Improvement in Ink-Stands.*—Patented December 13th, 1853.



This improvement consists in providing the ink-stand or ink-well cover with a curvilinear hinge on the top of the ink-stand or ink-well cover, which cover (see figure) is to be closed to form a round or smooth-turned face, and gives an opportunity of cleaning when soiled, inside as well as outside.

Claim.—The application of the stamped round part and the solid part (or the moving lid or cover), fitted together as a hinge, which forms a rounded, smooth-turned face; and the manner in which the pin is connected with both parts, using for that purpose the two pieces to form a regular curvilinear or round-turned hinge, made of any materials which will produce the intended effect.

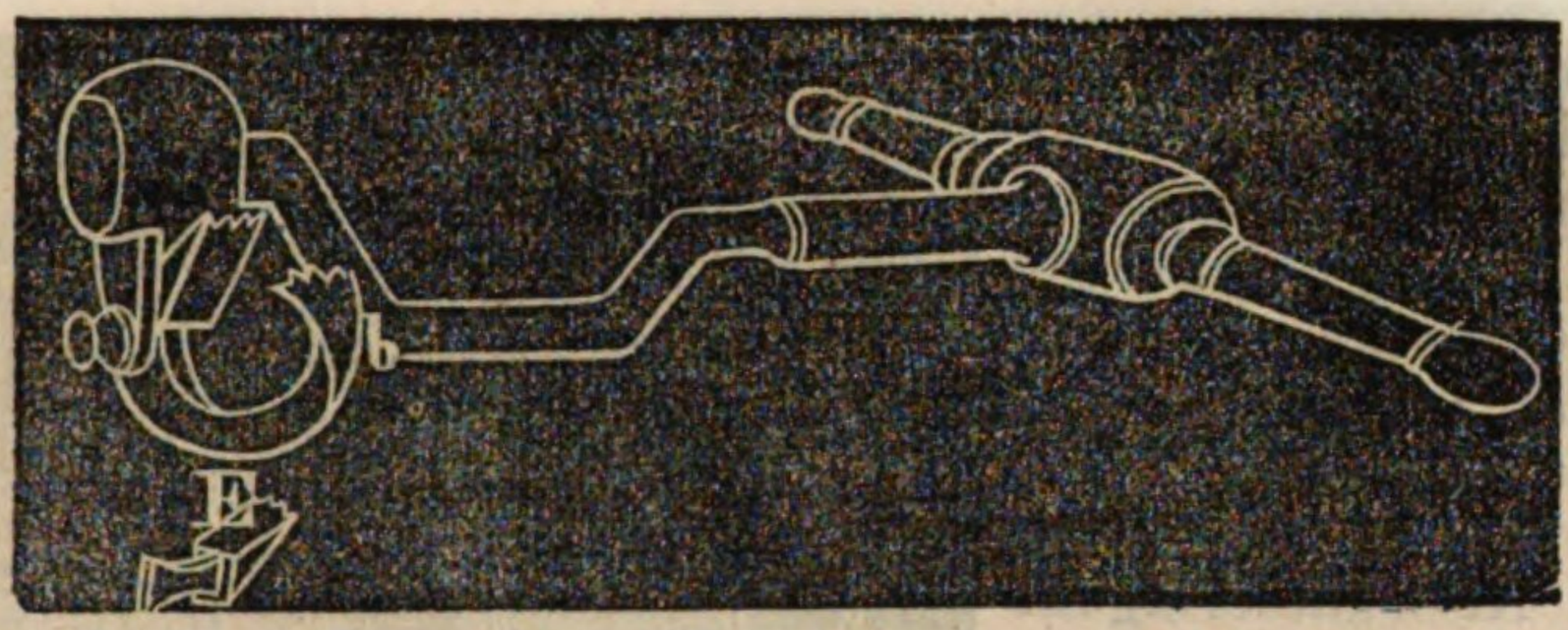
No. 10,311.—F. S. Hotchkiss and C. W. Blakeslee, of Northfield, Conn.—*Improvement in Clothes-Pins.*—Patented December 13th, 1853.

The figure and claim fully illustrate and explain this improvement.

Claim.—The connecting together of the two levers by one piece of metal, in such form and manner as to constitute both spring and hinge, for the purpose set forth.

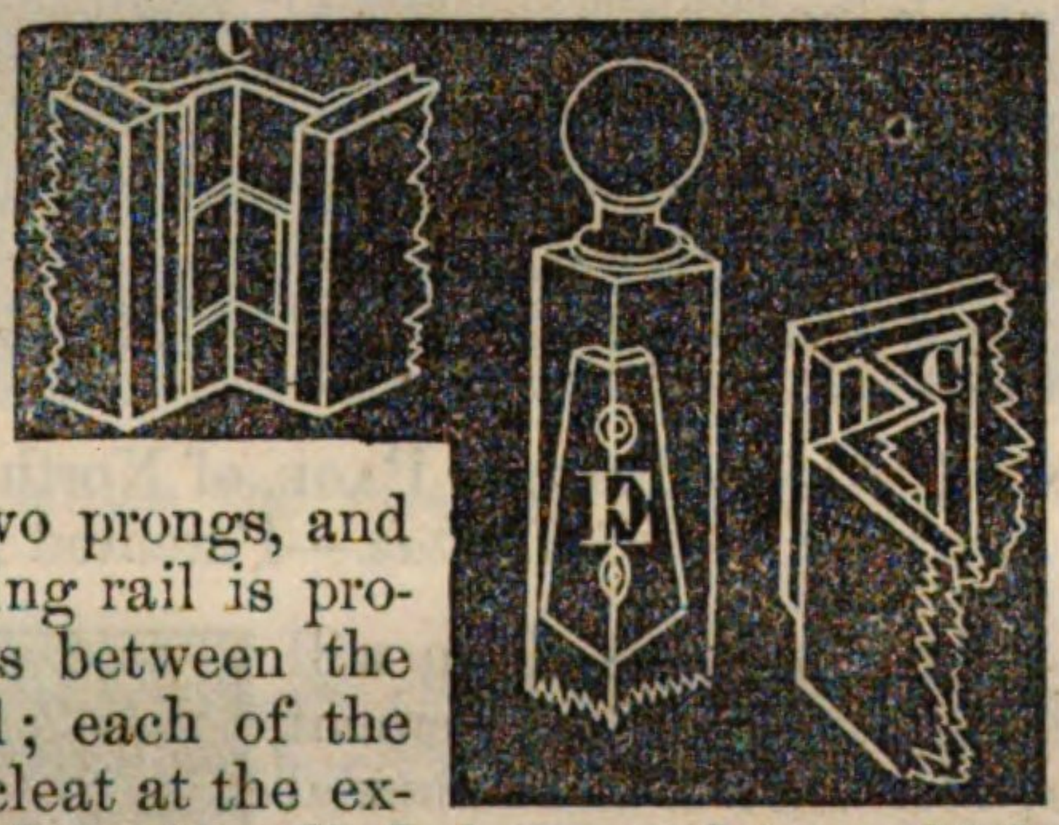
No. 10,312.—Melvin Jinks, of Wayland, N. Y.—*Improvement in Turnkeys for Extracting Teeth.*—Patented December 13th, 1853.

This improvement consists in providing turnkeys with an additional adjustable claw E. (See figure.)



Claim.—The adjustable claw E, constructed and arranged substantially as described, in combination with the claw *b*, and the rolling fulcrum having a limited motion.

No. 10,313.—WESTLEY E. MERRILL and FREEMAN TUPPER, of Nashua, N. H.—*Improvement in Fastenings for Bedsteads.*—Patented Dec. 13th, 1853.



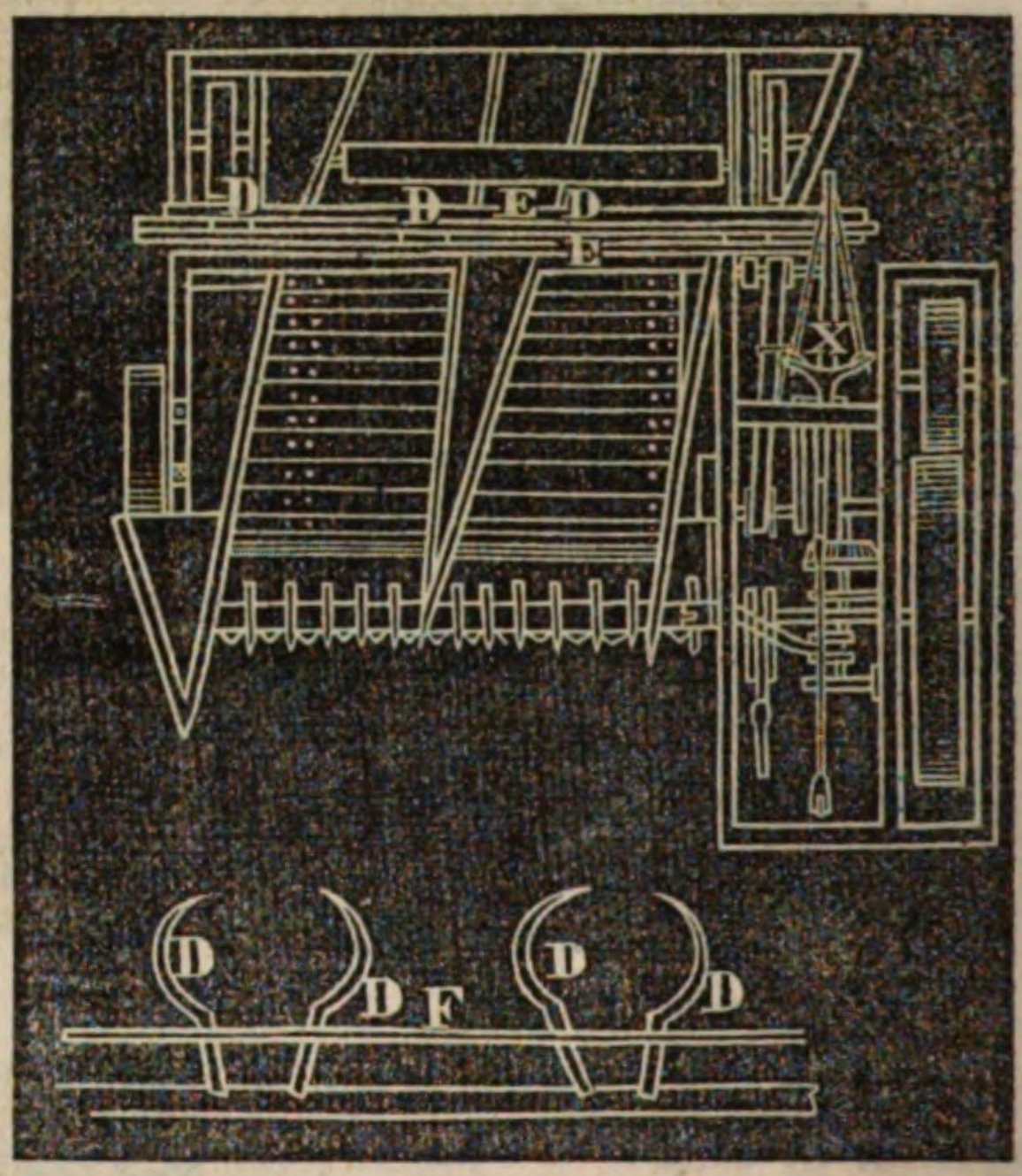
The posts and rails are attached together by means of corner-irons and clamps. The corner-irons are attached to the ends of the rails, and are bent in a zig-zag form, so as to make a recess for the reception of the post. The iron on the end of one rail has two prongs, and the iron on the end of the adjoining rail is provided with one prong, which fits between the two prongs of the adjoining rail; each of the prongs is provided with a small cleat at the extreme end of the rail; and the post has a bevelled clamp or dog E, which fits in the recess formed by the corner-irons, and binds against the cleats; and thus the post and rails are firmly secured together. (See figures.)

Claim.—Securing the posts and rails together by means of the corner-irons C attached to the ends of the rails, and the clamp, or dog, E attached to the posts; said corner-irons and clamps, or dogs, being constructed and arranged substantially as set forth.

No. 10,314.—JOSEPH E. NESEN, of Buffalo, N. Y.—*Improvement in Harvesting Machines.*—Patented Dec. 13th, 1853.

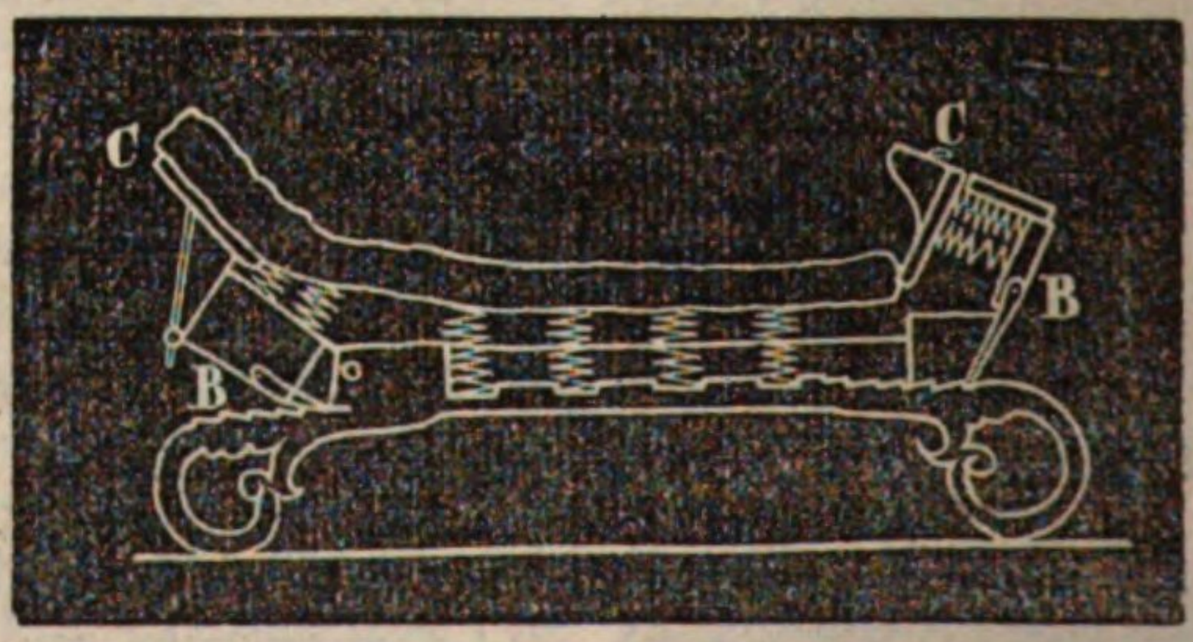
This invention consists in the employment of an endless apron, having an intermitting motion, for the purpose of conveying the grain in proper quantity to the binding-hooks. Also, in gathering in bundles, by means of binding-hooks, the grain cut by the reaper, the grain being carried up to the hooks by the endless apron; the binding-hooks are operated by means of slides having a reciprocating motion. Also, in the combination of the binding-hooks and endless apron.

Claim.—Giving the endless apron C an intermitting motion, for the



purpose of carrying the grain to the binding-hooks, at intervals and in proper quantity; said motion being communicated to the apron by means of belt-shipper x worked automatically from some moving position of the machine. Also, gathering the grain in bundles or sheaves by means of the binding-hooks D D D′ D′, or their equivalents, motion being communicated to the binding-hooks by means of the reciprocating bars E F. Also, the binding-hooks D D D′ D′, in combination with the endless intermittently moving apron C, the hooks and apron being constructed and arranged and operating substantially as set forth in the specification.

No. 10,315.—Charles Page, of North Danvers, Mass.—*Improvements in Sectional Bedsteads.*—Patented Dec. 13th, 1853.

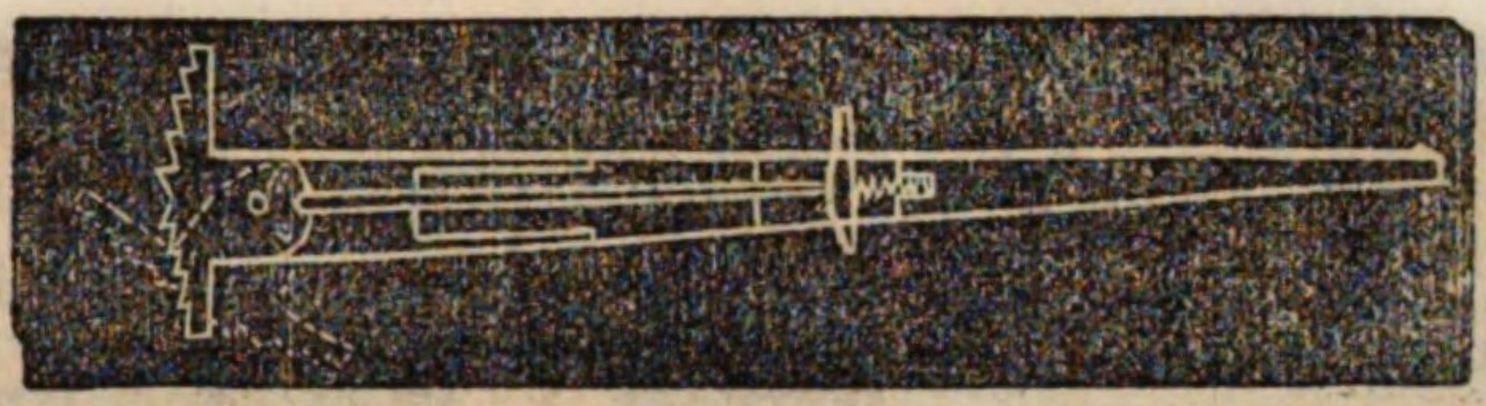


The inventor's claim will explain this improvement by reference to the annexed figure.

Claim.—In a sectional folding-bedstead, the combination of the adjustable sections B B′, with the revolving head and foot boards C C′; by means of which the bedstead may at any time be converted into an invalid bedstead, and extended in such manner that the body and head of the patient may be raised and lowered independently of each other, his feet being furnished with an elastic foot-board.

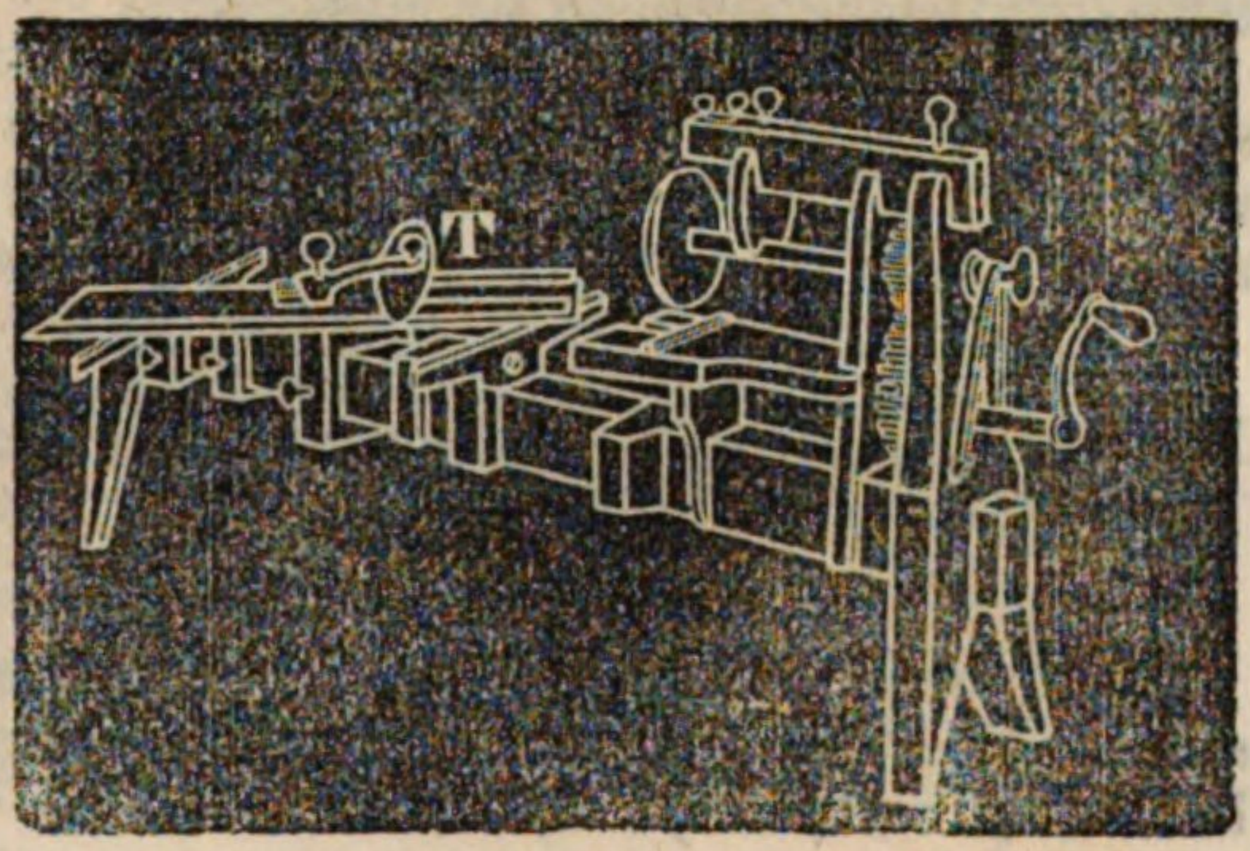
No. 10,316.—Joseph Sawyer and Lyman Clark, of South Royalston, Mass.—*Improvements in "Peg Rasps."*—Patented Dec. 13, 1853.

The nature of this invention consists in hanging the rasp upon a pivot, and adapting thereto a spring-bolt; by which means it may be securely fastened in one of two positions, so that the same instrument may be readily adapted to work either in the heel or the toe of the boot.



Claim.—The combination of the spring-bolt and thumb-piece, or their equivalents, with the pivoted rasp.

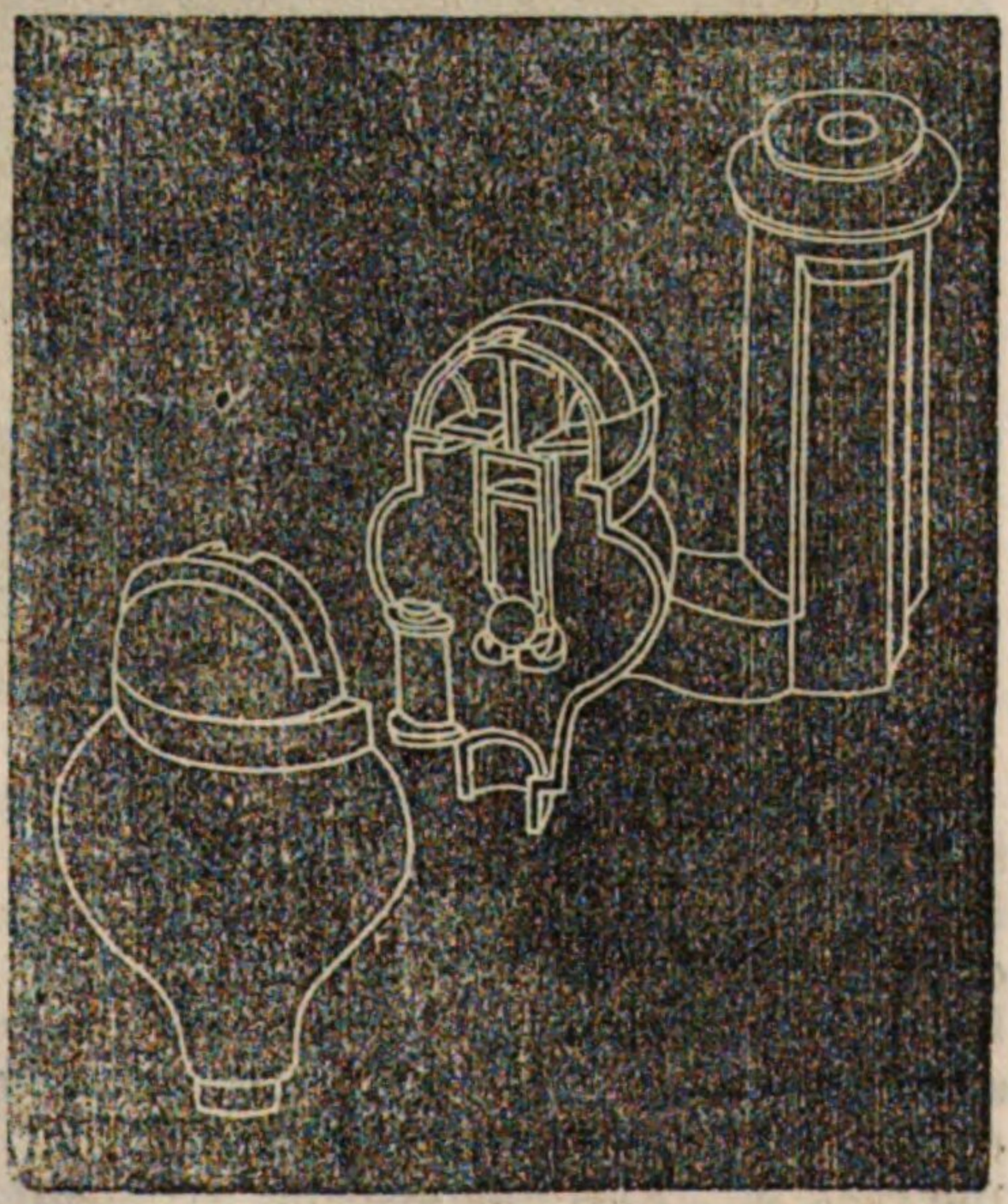
No. 10,317.—JOHN WILMINGTON, of South Bend, Ind.—*Improved Sheet-Metal Cutter.*—Patented December 13th, 1853.



The object of this invention is to cut sheet-metal into angles, parallel lines, circles, and segments of circles, and consists in the employment of the vice T (see figure) in combination with the tram upon which it moves. The cut represents a perspective view of the apparatus.

Claim.—The vice T in combination with the tram upon which it moves, and upon which the sheet rests during the operation of cutting.

No. 10,318.—JOEL R. BASSETT, of Cincinnati, Ohio.—*Improvements in Valves for Pumps.*—Patented December 13th, 1853.

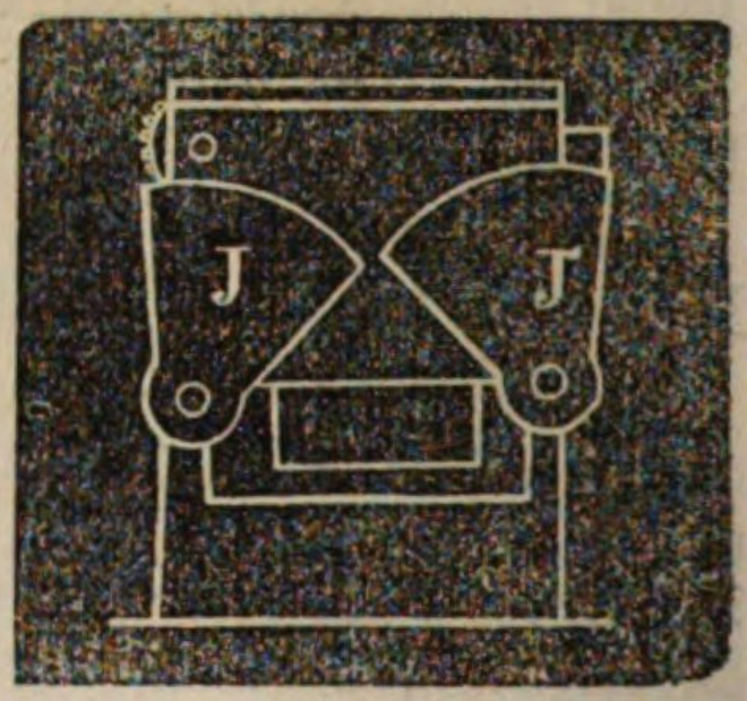


These improvements consist in an arrangement by which the advantages of a pneumatic cushion, check-valve, and stationary valve, are combined; and in providing the discharge openings of a double-acting pump with a slide-valve common to both, moving simultaneously with, and actuated by, the supply-valves.

Claim.—The construction of the puppet check-valve, serving also as the piston of a pneumatic spring, and provided at its lower end with a small starting valve, substantially in the manner and for the objects explained in the specification. Also, the seg-

mental cylindric slide-valve of the discharge-openings, having prongs, as described, connecting it with the clack-valves upon the supply-openings, so that the motion of the supply-valves shall be communicated to the discharge-valve.

No. 10,319.—JOHN BUTTER, of Buffalo, N. Y. *Improvement in Machines for Moulding Brick.* Patented Dec. 13th, 1853.

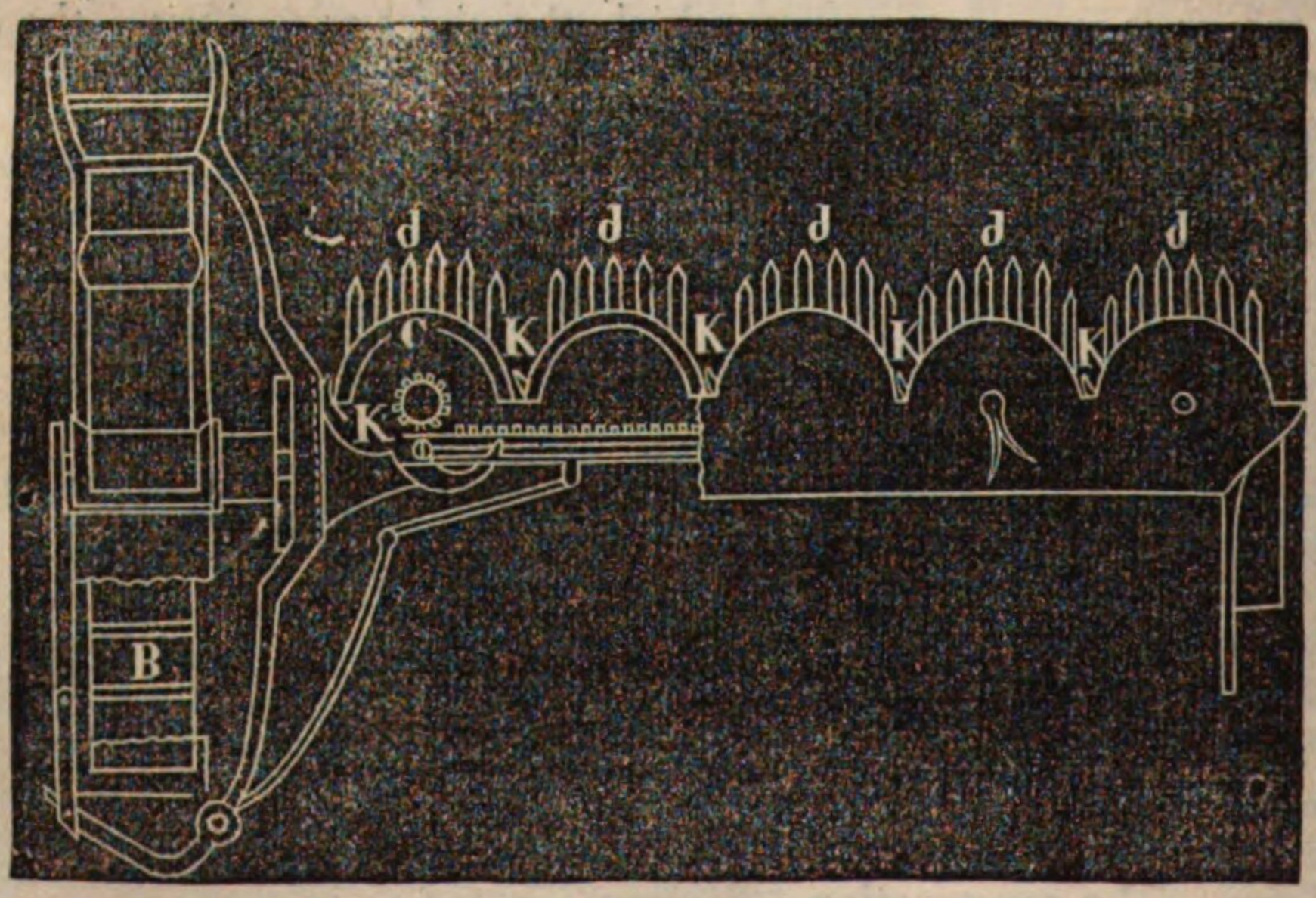


J J are two followers, operated by either levers or gears, to press the clay from opposite directions into the moulds.

Claim.—Two hinged followers, so constructed and operated as to press the clay uniformly into the moulds, that is, each end alike, whether operated by gears or levers.

No. 10,320.—JOHN E. BROWN and STEPHEN S. BARTLETT, of Woonsocket, R. I.—*Improvement in Harvesters.*—Patented December 20th, 1853.

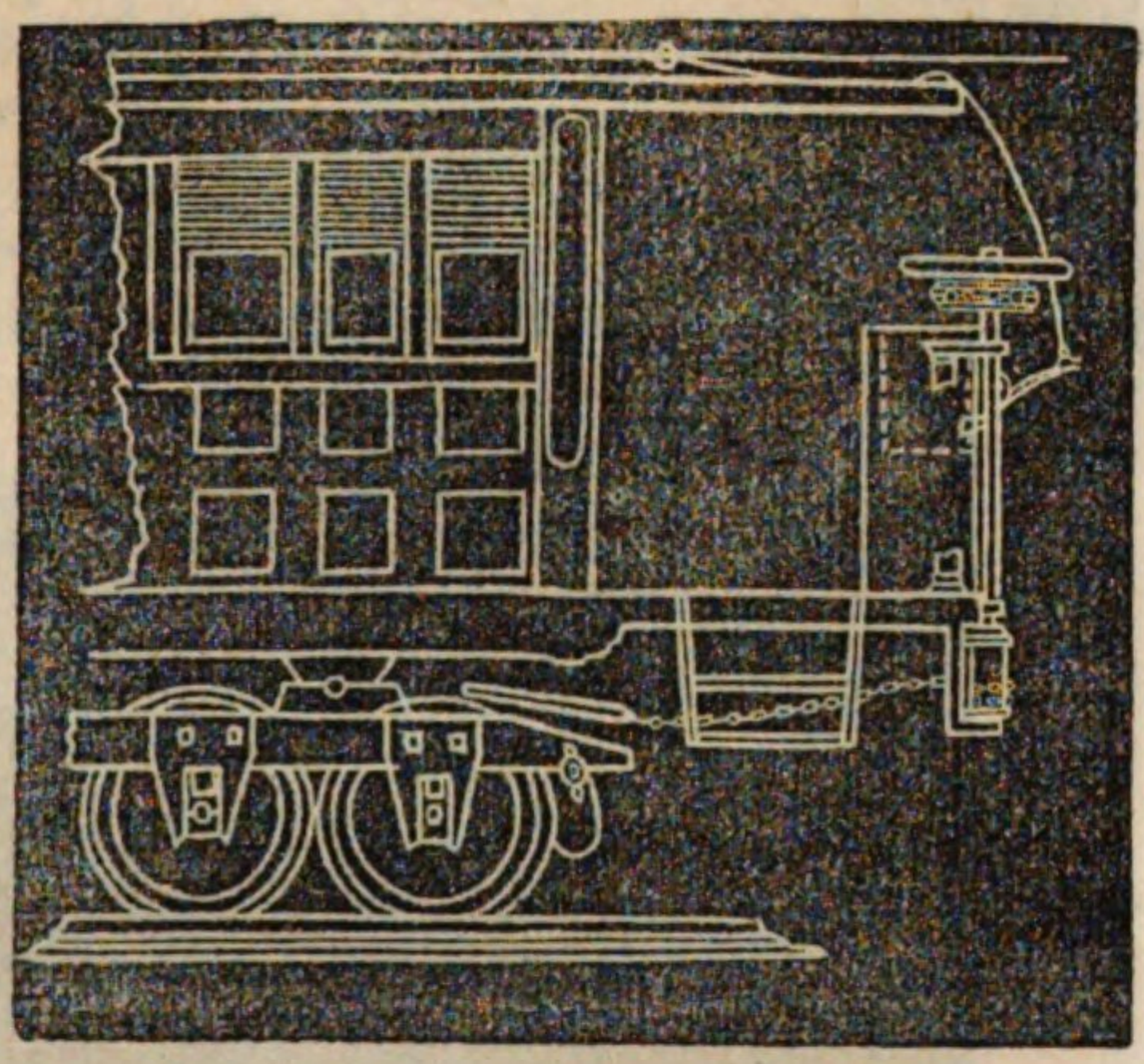
By reference to the annexed figure the claim explains this improvement. The teeth *d d*, &c., gather the grain or grass, and the double bladed-knives K K K, &c., cut it.



Claim.—The double-bladed or two-edged knife K or its equivalent, so constructed as to cut in each direction as it is vibrated, as described in specification. Also, the knife K, in combination with the curves c and teeth *d d*, &c. Also, the mode of operating the double-bladed knives or cutters K K by means of the rack M and pinions L L, substantially as set forth. Also, the arrangement of the devices which communicate motion from the internal part of the driving-wheel to the rack M. Also, the gearing arranged and combined so as to work

within the main-wheel B², and operate the crank upon the axle of the main-wheel, substantially as described.

No. 10,321.—Wm. G. Creamer, of New Haven, Conn. —*Improved Mode of Operating Brakes.* — Patented December 20th, 1853.

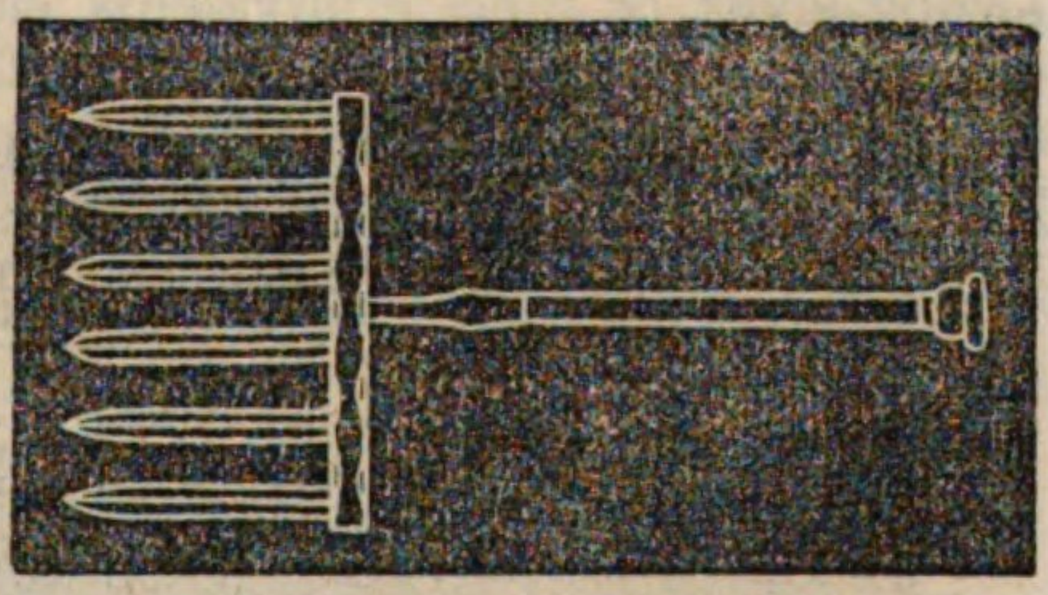


This invention consists in a mode of opening the brakes of railroad cars by pulling the signal cord, which method does not interfere with the use of the brakes by the brakeman as usual, nor interfere with the use of the cord for transmitting signals to the engineer.

Claim. — The method (as described in the specification) of attaching the lines that operate the springs or weights to the signal-line, so that the engineer may be able to close all the brakes by said line, while it may be used for transmitting signals from the rear of the train to the engineer without operating the brakes.

No. 10,322.—Benjamin H. Franklin, of Worcester, Mass.—*Improvement in Manure and other Forks.* — Patented December 20th, 1853.

(See figure.)

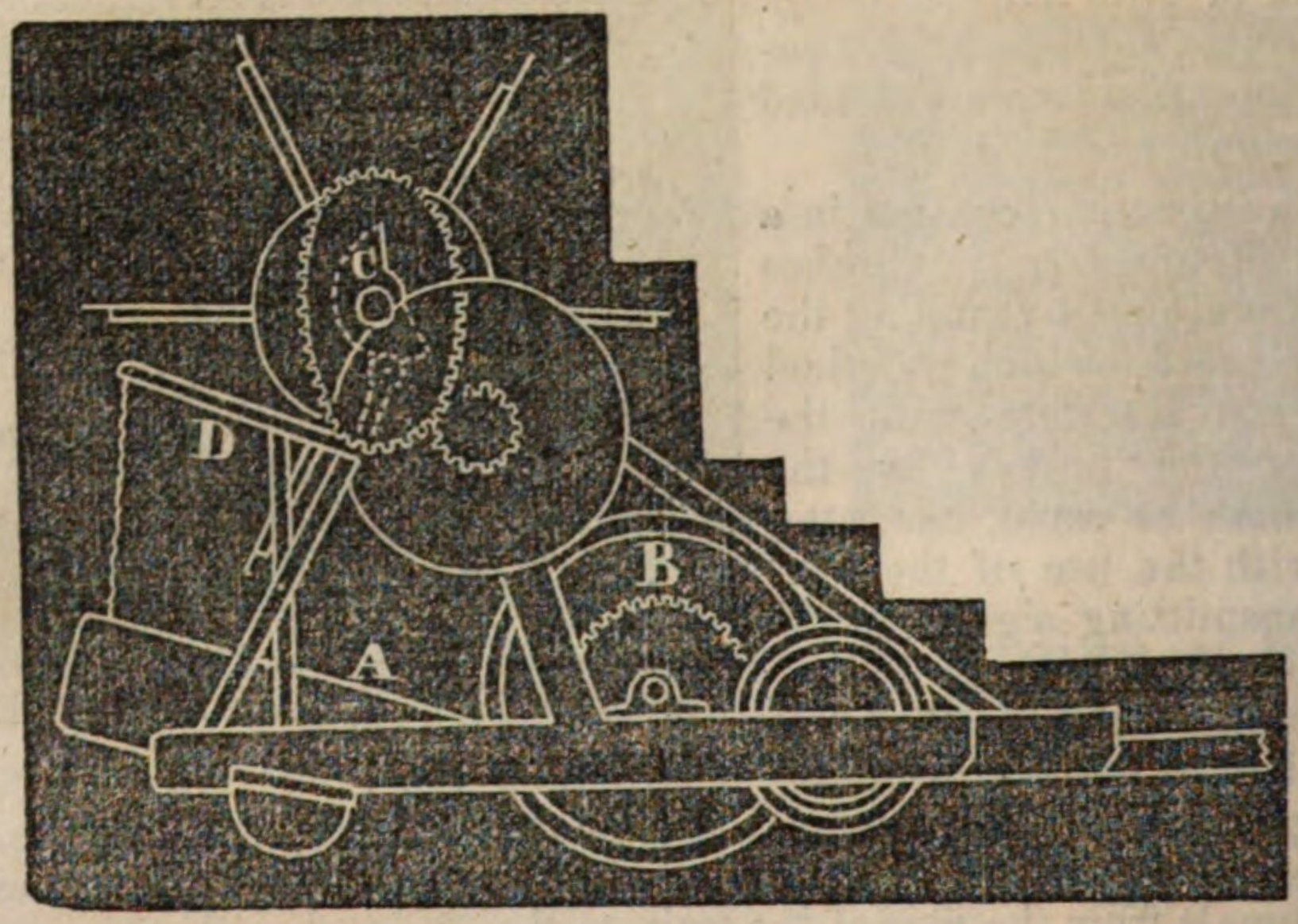


Claim.—Making the tines of forks three-sided, whereby the weight is diminished, the strength retained, and the holding properties of the fork improved; and at the same time it is prevented from choking, and the article is more cheaply constructed.

No. 10,323.—Uriah H. Goble, of Springfield, Ohio.—*Improvement in Harvesters.*—Patented December 20th, 1853.

The nature of this invention consists, first, in making the driving or ground wheel conical, with the larger diameter next the grain, for the double purpose of throwing forward that end of the machine which is in the grain, and causing it to *run out* of the grain, as it were (its natural tendency being, through leverage and the resistance of the standing grain, to run into it), and also for balancing the machine, by throwing the weight of it on the outside of the wheel, and preventing the side draft, or counteracting it, and causing the reaper to follow the line of draft. Also, in leaving a space entirely

around the cutter-bar where it passes through the guard or fingers, which space may be enlarged in rear of the bar, and supporting and guiding the bar in its reciprocating movement in guides or boxes placed between the fingers, for the purpose of preventing the bar from clogging in the fingers, and allow it to clear itself of the gum, straw,

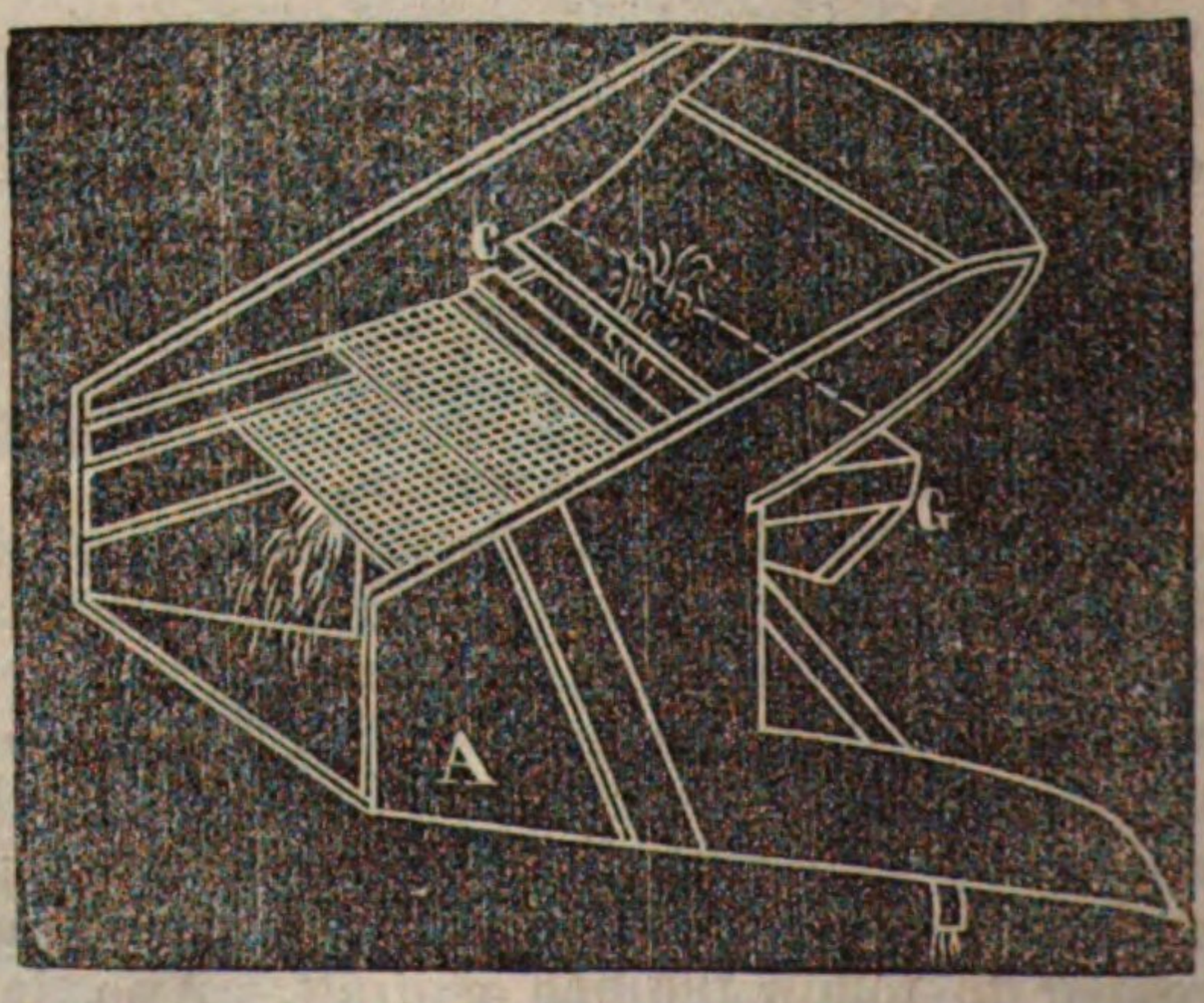


chaff, or lint. Also, in hinging an apron on the rear part of the platform, in such a manner, that by means of a cam on the reel-shaft, and a swung-lever, or their equivalents, said rear part of the platform may, at stated periods, be let down, to facilitate the throwing off the cut grain from the platform. (See fig.) B is the conical shaped-wheel; C, the cam; D, lever; A, platform.

Claim.—The above description embraces the claim of the inventor.

No. 10,324.—JOSEPH MONTGOMERY and JAMES MONTGOMERY, of Lancaster, Pa.—*Improvements in Winnowing Machines.*—Patented December 20th, 1853.

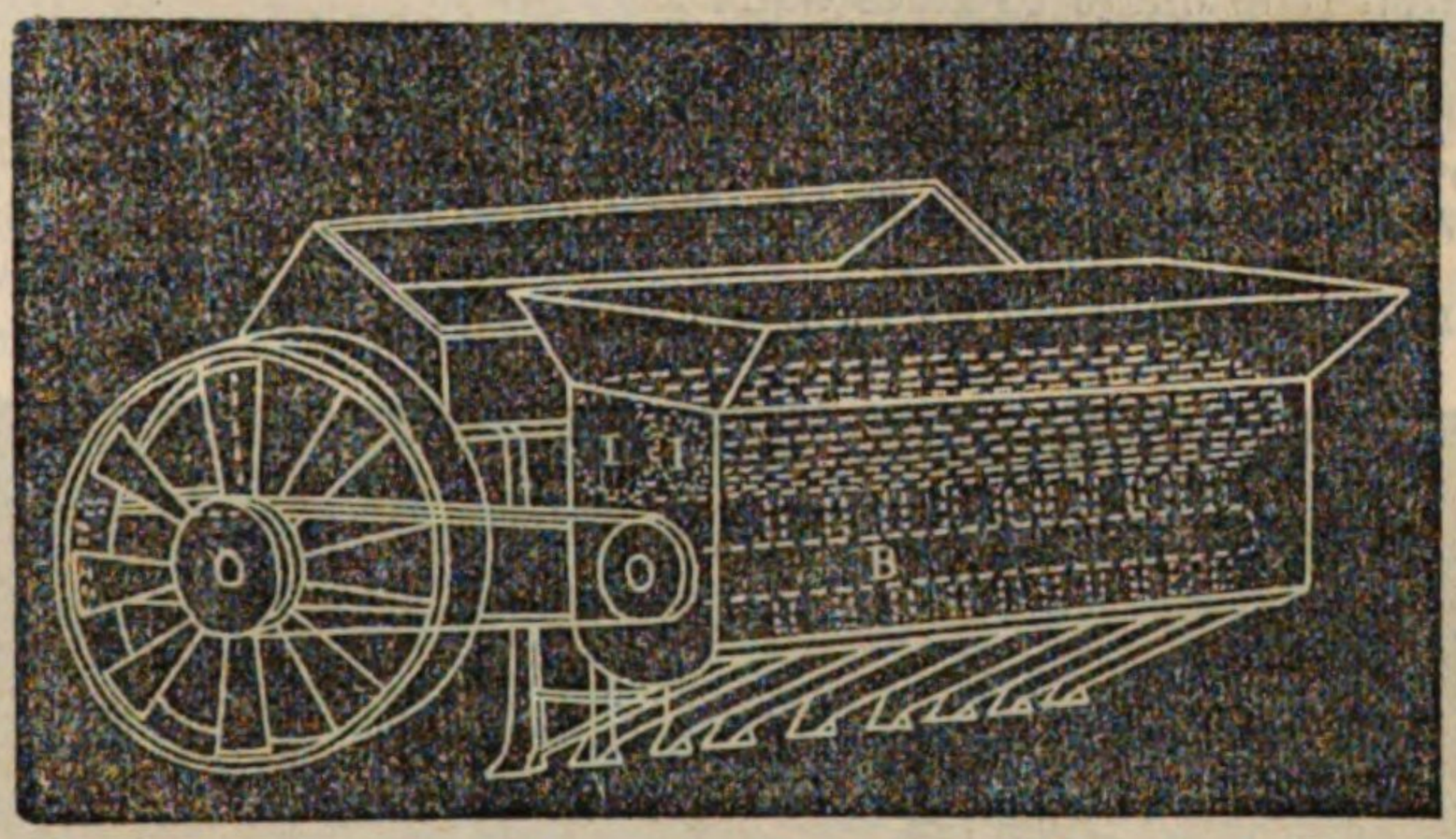
This invention consists in the combination of an additional removable shoe and a closable door, or aperture, in the apron of a winnowing machine, with an ordinary winnowing machine. (See fig.) G is the shoe; c, the opening. The object is to increase or diminish the screening surface, and thereby adapt the machine to cleaning various sized seed or grain, more expeditiously than hitherto.



Claim.—The construction and arrangement of the ordinary shoe A, so as to receive an extra shoe G, and door C, substantially in the manner and for the purposes specified.

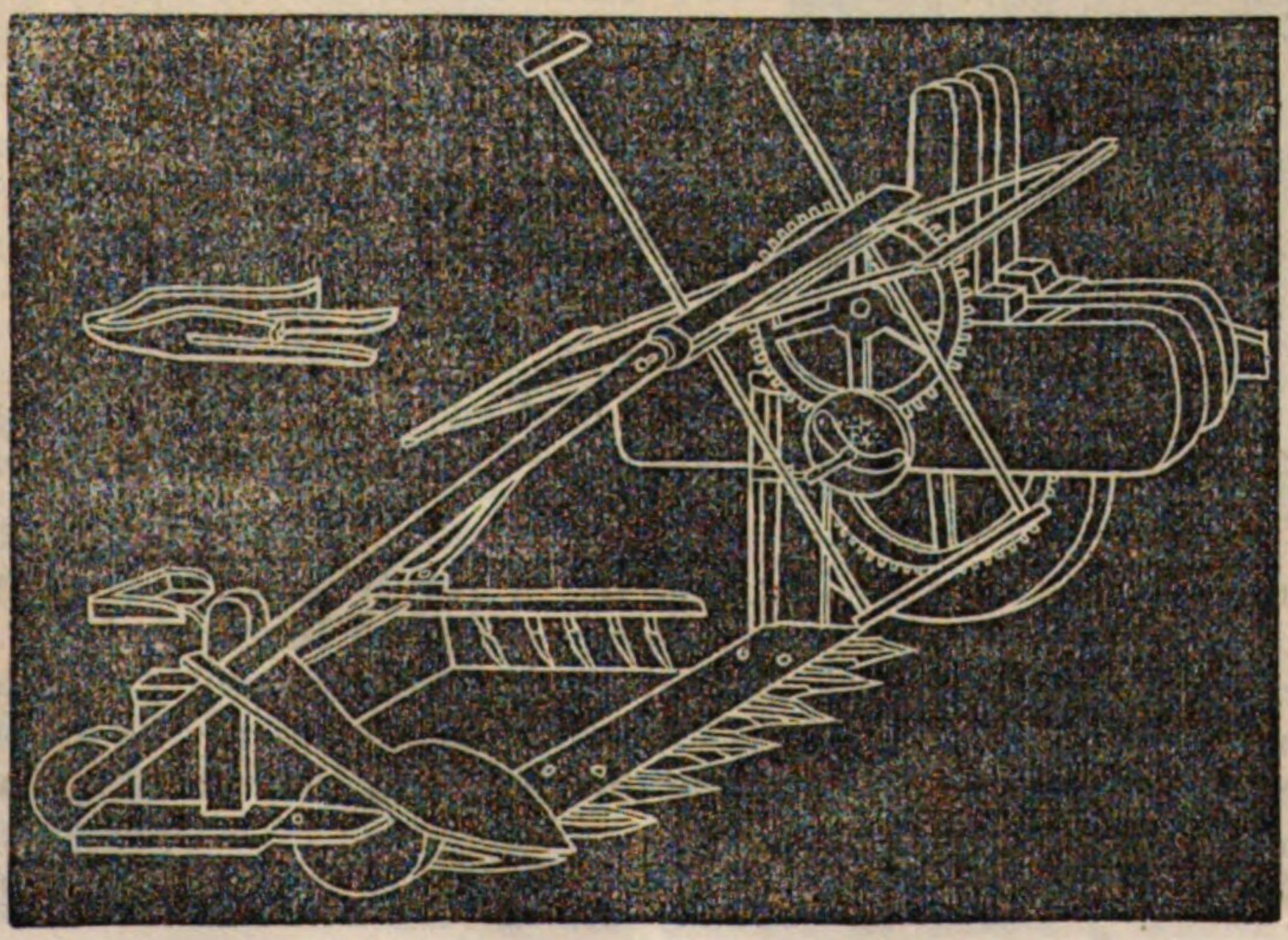
No. 10,325.—THOMAS F. NELSON, of Clark Co., Va.—*Improved Mode of Sowing Guano and other fine Manures.*—Patented December 20th, 1853.

This invention consists of two toothed cylinders I I, and shaft B, in combination with a seed-planter (see fig.), for pulverizing and sowing manures.



Claim.—The combination of the fluted or toothed cylinders I' I'' with the toothed-shaft B, for the purpose of grinding and distributing guano, &c., the whole being in combination with any ordinary seed-planter.

No. 10,326.—WILLIAM SCHNEBLY and THOMAS SCHNEBLY of New York, N. Y.—*Improvement in Grain and Grass Harvesters.*—Patented December 20th, 1853.

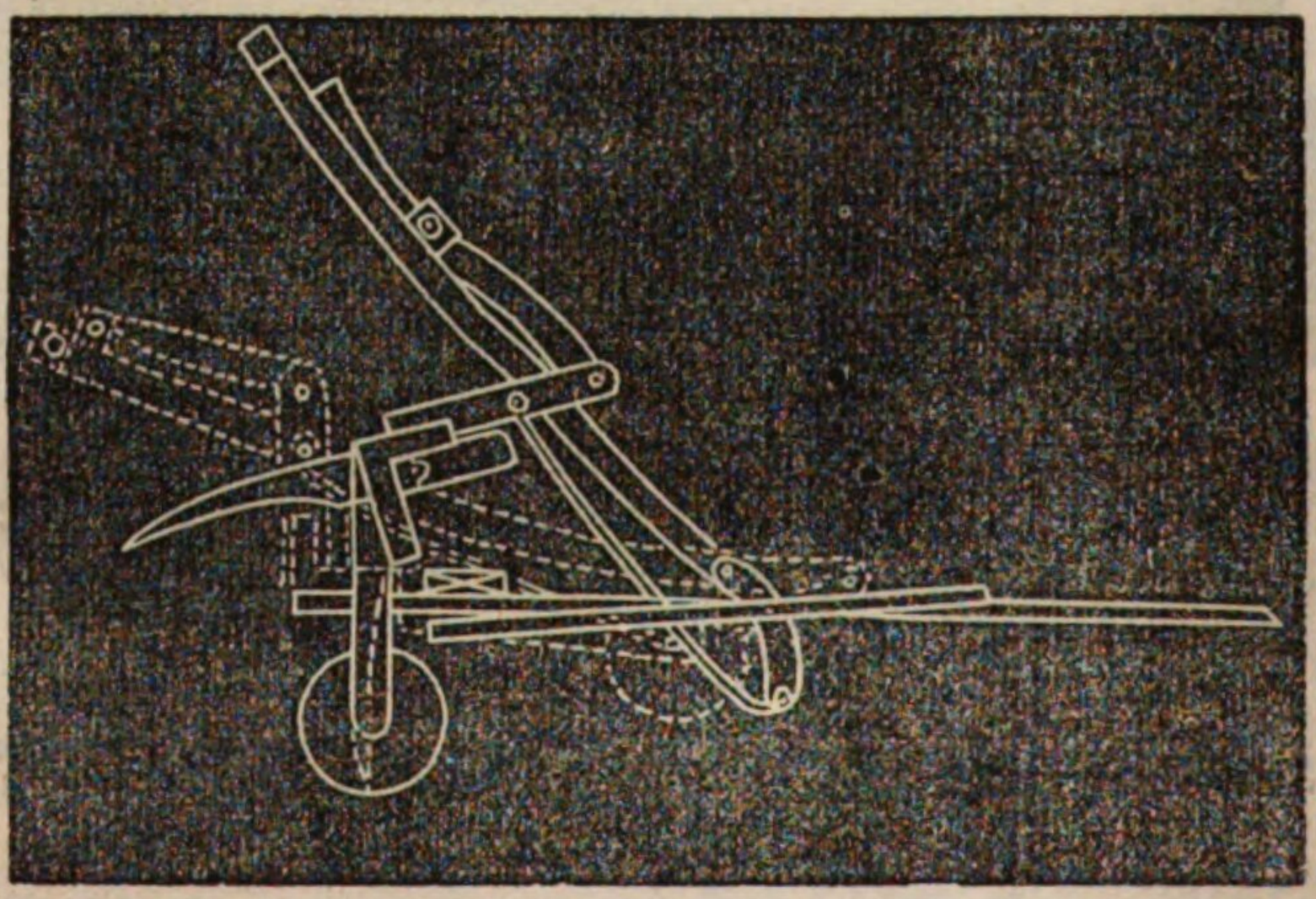


This invention consists in the arrangement of the gear by which the lateral motion of the cutters is regulated; in the construction of the guard-fingers; and the arrangement of the self-acting rake.

Claim.—The method of arranging the gear in combination with the movable plate to which the crank-pin F X is fastened, said movable plate being located on the flange F of the second pinion; by which method the lateral distance of the motion of the cutters can be increased or diminished. Also, the method of constructing the hollow guard-fingers, each one being a single piece only. Also, the self-acting rake with jointed fingers, in combination with the guide-rods upon which it is made to slide back and forth.

No. 10,327.—HIRAM N. TRIPP, of Alfred, Me.—*Improvement in Power-Rakes.*—Patented December 20th, 1853.

The annexed figure shows two positions of this rake.

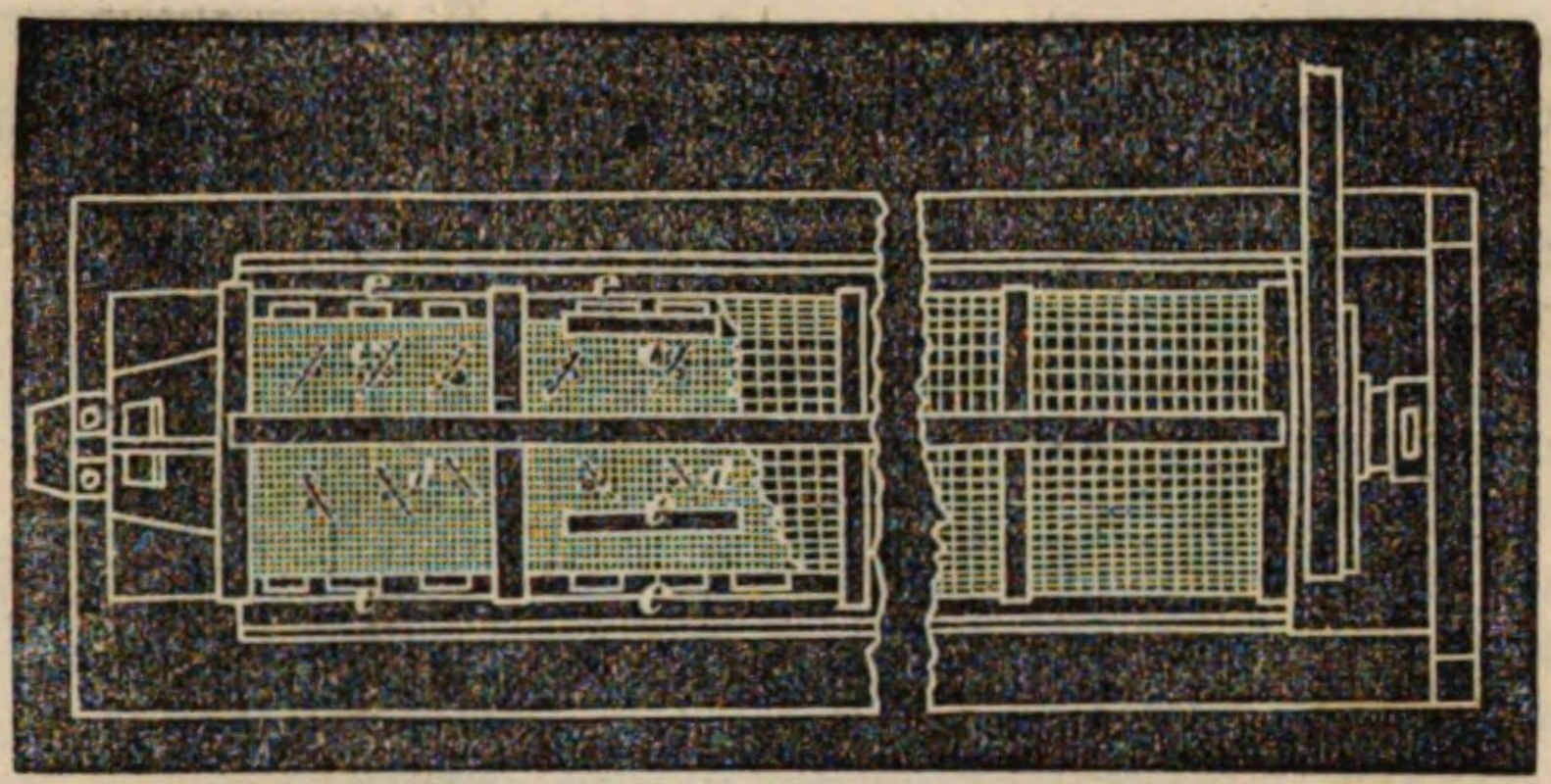


Claim.—The combination of a set of levers and braked raft-bars with the rake-head and shafts, so that, by the conjoined action of the forward draft of the horse and the back draft of the attendant, the rake may be either turned up or off the ground, and supported on its wheels, or turned down so as to bring its teeth in contact with the ground.

No. 10,328.—ROBERT P. WALKER, of New York, N. Y.—*Improved Machine for Hulling and Scouring Coffee.*—Patented December 20th, 1853.

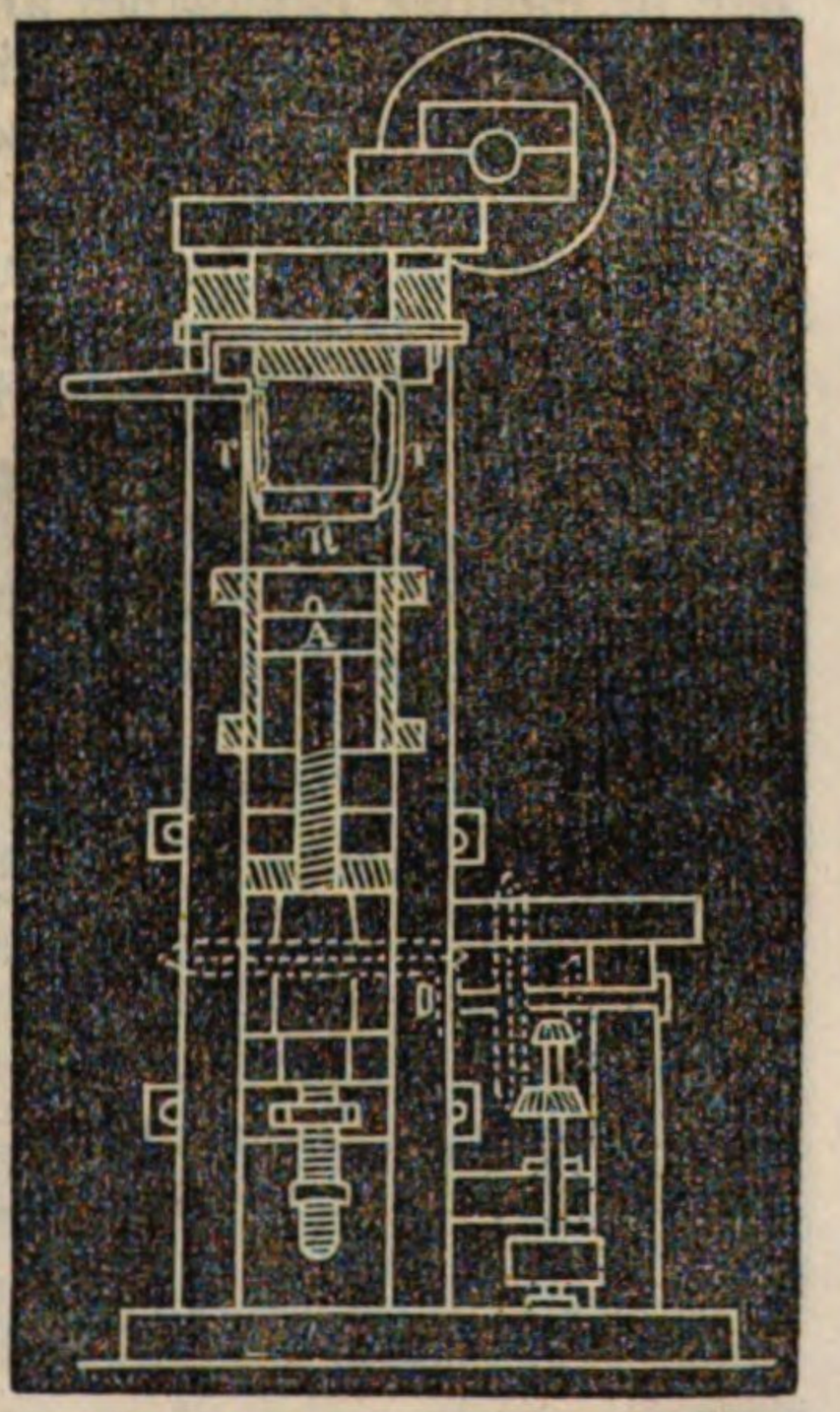
This invention consists in providing a revolving cylinder, covered with wire-net, with a series of rasping or toothed beaters *c d* (see fig.), which can be set at any desired angle; together with a series of springing gum-elastic rubbers, for the purpose of giving a proper direction to the coffee; separating the shell and inner coatings of the kernels, and scouring the grains.

Claim.—The combination of the springing rubber-flaps, or scourers



and polishers *e e e* with the angularly set hullers or beaters *c d*, the whole being constructed and arranged in any equivalent manner to that described, and operating as set forth.

No. 10,329.—J. B. ARMSTRONG, of Barnwell, S. C.—*Improvement in Cotton-Presses.*—Patented December 20th, 1853.

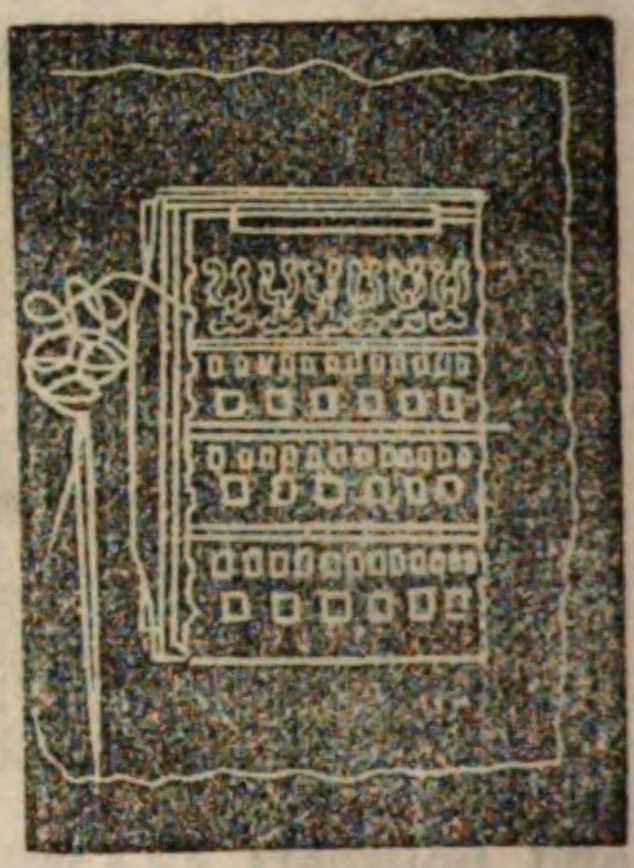


This invention consists in the use of a false platen *n*, in addition to the ordinary platen A, so arranged as to carry the load of cotton under compression during the ascent of the screw. The bale is restrained from yielding by its retention between the false top and bed—and while thus, is stitched and roped—when the link-rods are unhooked from holding the false top, which drops down on the main platen, and the finished bale is removed.

Claim.—The method of holding the bale under compression, and preventing it from springing or yielding during the stitching and roping of the same, whilst the platen is being run down or back by means of a false top or platen, hooked or otherwise hitched to the bed, and arranged to work in connection with the main platen, whereby time is economized in the operation of the press.

No. 10,330.—CHARLES ATWOOD, of Birmingham, Conn.—*Improved Mode of Attaching Hooks and Eyes to Cards.*—Patented December 20th, 1853.

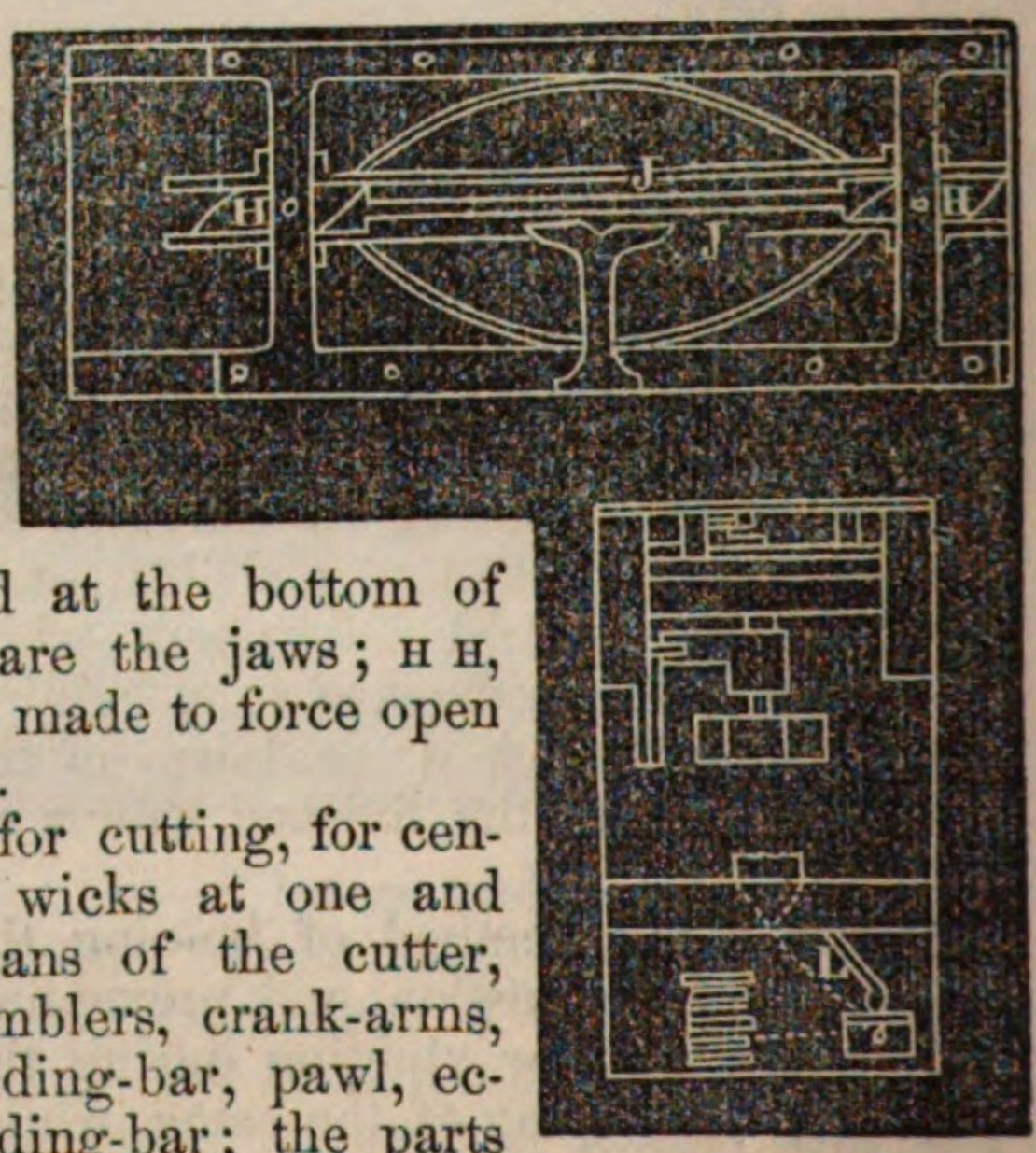
This invention consists in the manner of fastening hooks and



eyes, with thread, small splints of wood, or other suitable material, to crimped cards which have been pierced with transverse rows of mortise holes—suitable for laying them in, or passing them through; and also in the process of attaching them to the cards, by the aid of suitable apparatus. (See figure.)

Claim.—The crimped and perforated cards, combined with thread or thin splints, to fasten hooks and eyes to them, as described. Also, the attaching of hooks by the aid of a block, clamp, and cords, or by means substantially the same.

No. 10,331.—D. E. Battershall and M. Battershall, of Troy, N. Y. —*Improvement in Candle-Moulds.*—Patented December 20th, 1853.



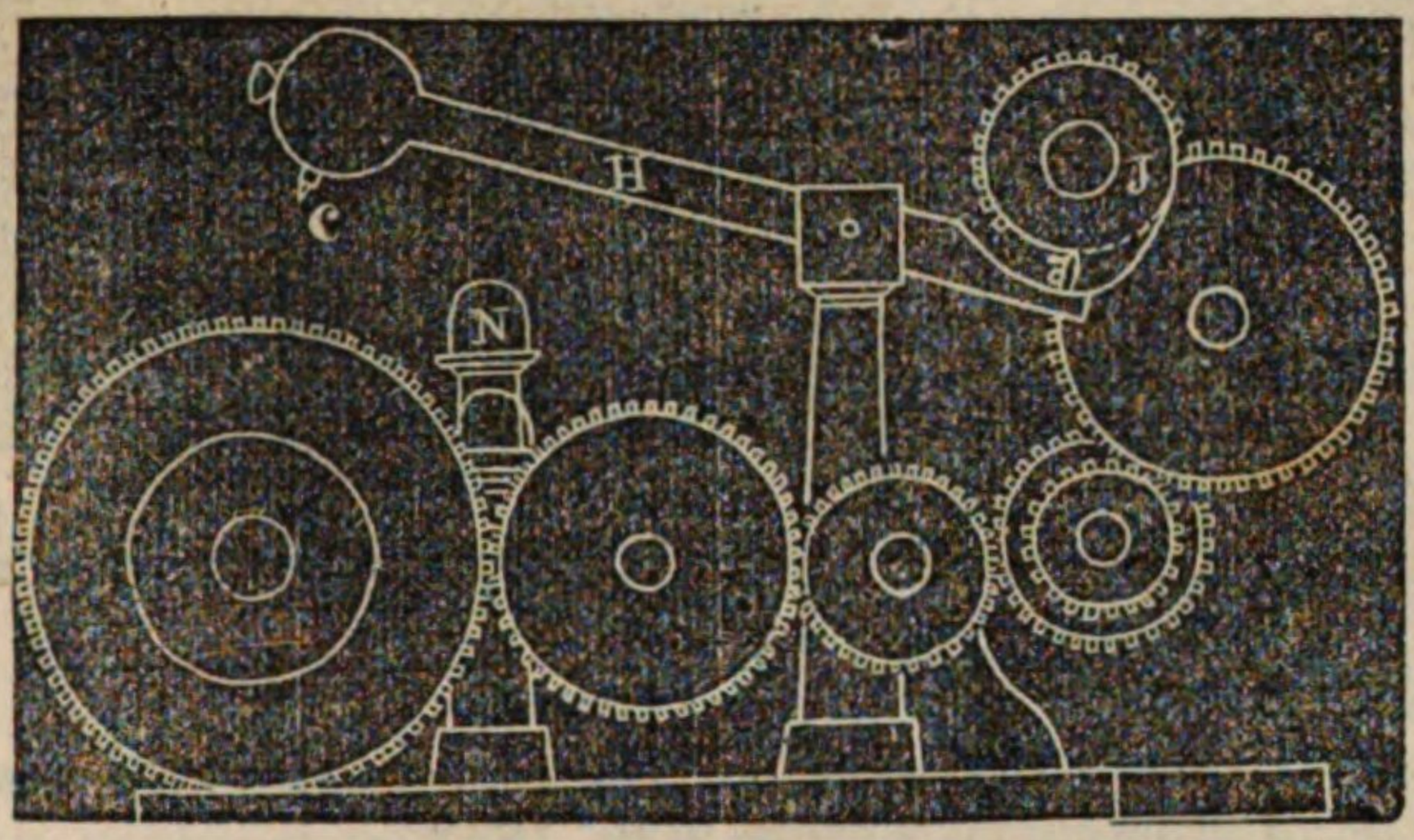
The nature of this invention consists in the peculiar manner of cutting, centering, and holding the wick tight in the moulds, in readiness for use; by means of spring-jaws, with cutter, centering-plate, and wick-holder, arranged on the top of the machine and moulds; also a wick-tightener arranged at the bottom of the machine. (See fig.) J J are the jaws; H H, buttons or tumblers, which are made to force open the jaws, or bear against them.

Claim.—The arrangement for cutting, for centering, and for holding the wicks at one and the same operation, by means of the cutter, guide-plate, jaws, springs, tumblers, crank-arms, connecting-rods, horizontal sliding-bar, pawl, eccentric-plate, and vertical sliding-bar; the parts being arranged and operating in the manner and for the purposes set forth. Also, the wick-tightener L.

No. 10,332.—James Baxendale, of Providence, R. I.—*Machine for Stamping Patterns on Rollers.*—Patented December 20th, 1853.

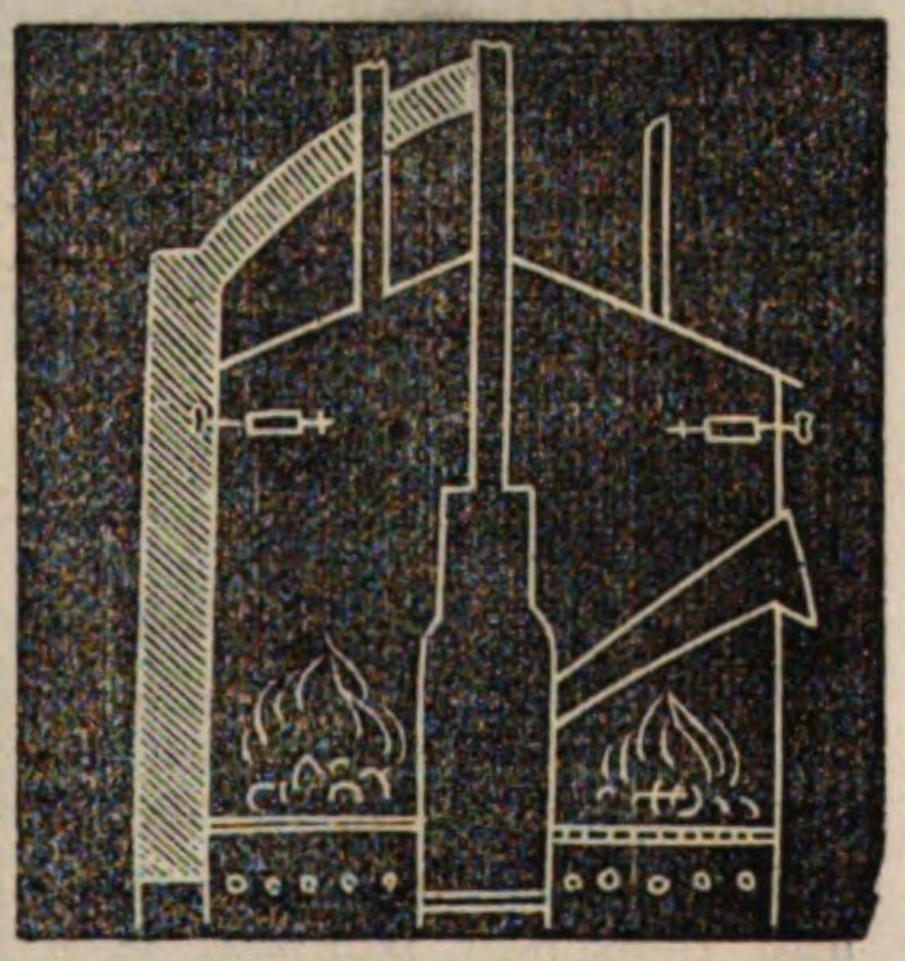
This invention consists in stamping the rollers with any device, repeated in circular, spiral, longitudinal, or irregular succession, by means of a punch or punches, attached to a weighted arm or lever, which is raised by a cam, and which falls on an elastic gauge, which serves to raise the punch from the surface of the roller, immediately after the blow is struck, and prevents it from being broken either by

too severe concussion, or by the movement of the roller while it remains in the indentation it has made.



Claim.—Stamping rollers for printing cotton or other textile fabrics by means of a punch *c*, which is attached to a weighted arm or lever H raised by a cam J, and allowed to fall on an elastic gauge N, at regular intervals of time, while the roller is moved in the direction in which the pattern is to be repeated.

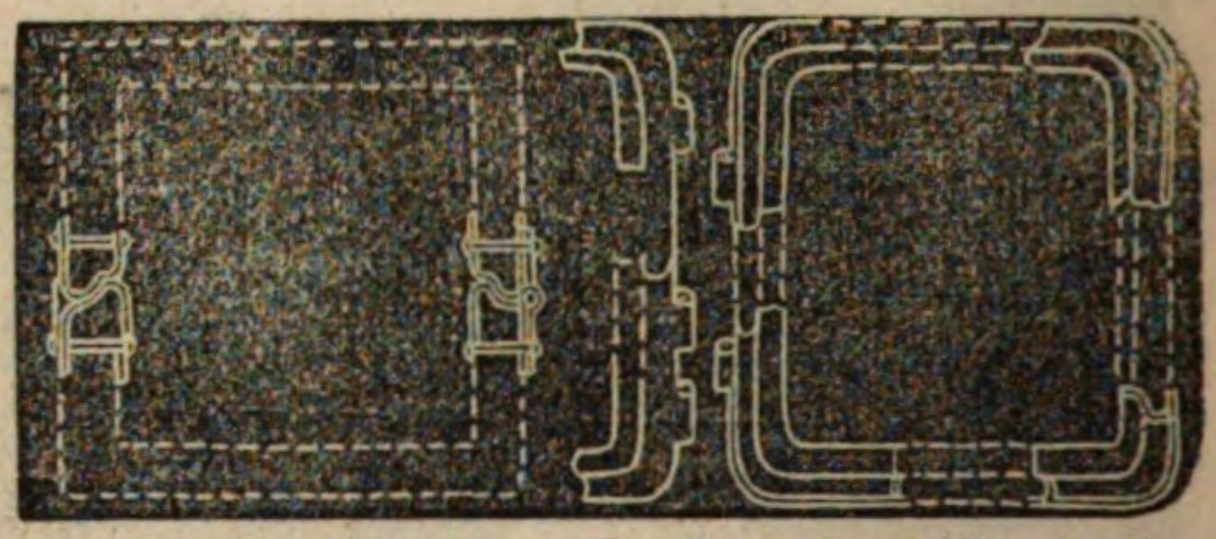
No. 10,333.—JAMES BOLTON, M. D., of Richmond, Va.—*Improvement in Hot-Air Furnaces.*—Patented December 20th, 1853.



The nature of this invention consists in dividing an air-chamber, surrounding a stove or furnace by partitions into separate compartments, each of which is to be connected with one or more separate warm air flues, so that each flue or set of flues may be supplied with warm air from that compartment exclusively with which the flues or set of flues may be connected. (See fig.)

Claim.—The division into compartments of the air-chamber surrounding a stove, furnace, pipe, or other contrivance for warming the air which it contains, so that the warm air may be drawn off by flues from each compartment, without interfering with the supply of warm air from the other compartments.

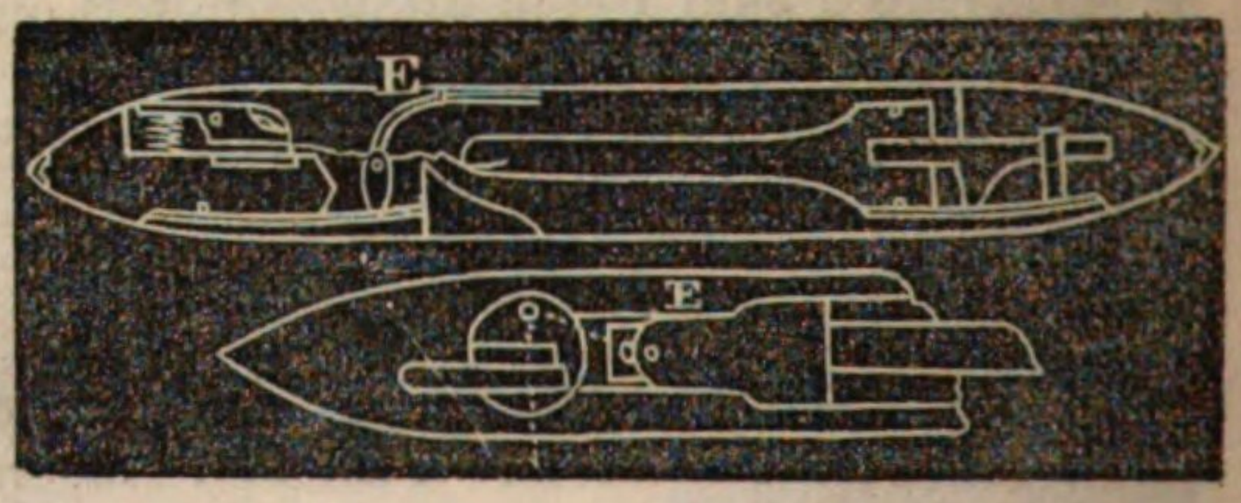
No. 10,334.—Lazare Cantel, of New York, N. Y.—*Improvement in Metallic Trunk-Frames.*—Patented December 20th, 1853.



Claim.—Forming the joints of trunks (see fig.) by arming the edges of the material of which the body is composed with sheet metal covering, crimped in the form of tongues, whereby protection to the surface from wear is obtained; and also the effect of a stiffening frame, as well as strength in the tongues, and at a small expense.

No. 10,335.—David Carroll, of Baltimore, Md.—*Improvement in Shuttles.*—Patented December 20th, 1853.

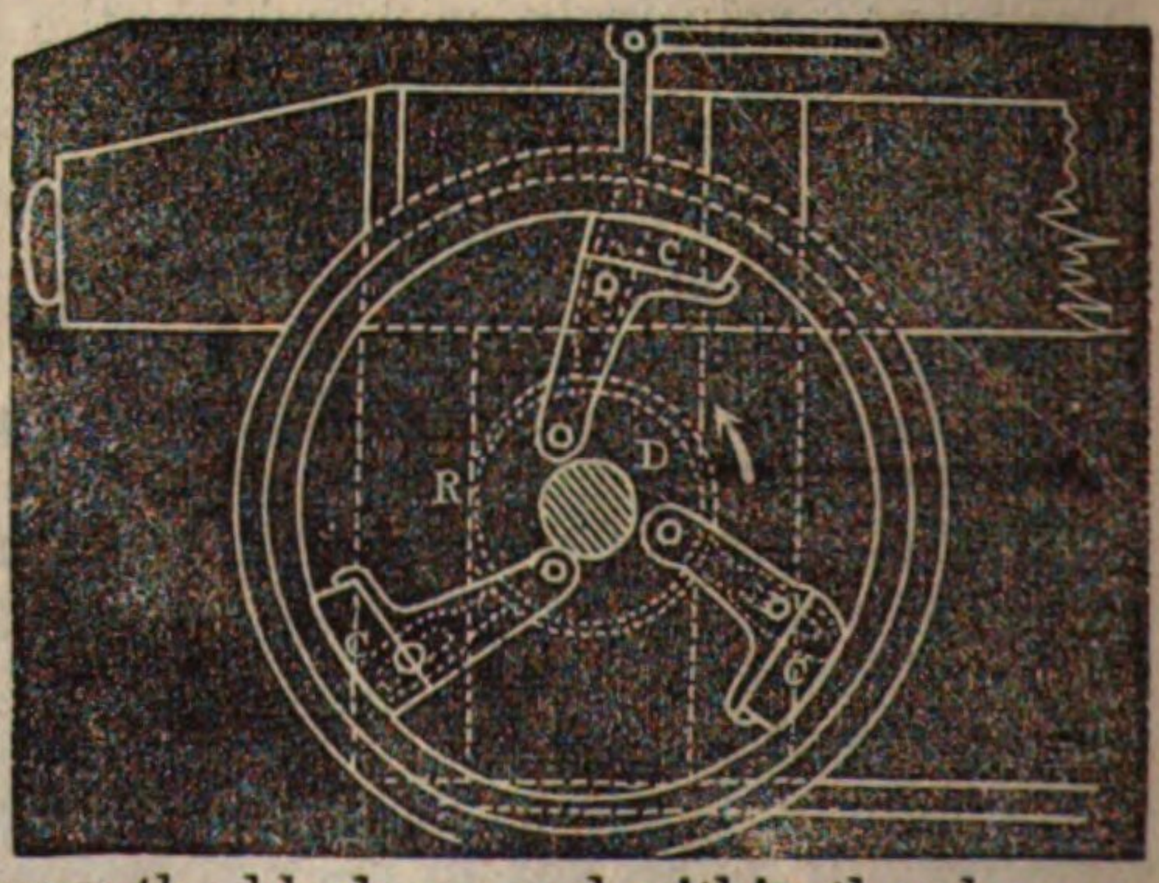
The object of this invention is to prevent the thread from looping when it plays off too fast from the bobbin, and consists of a guard-plate, placed in front of the point of the bobbin, and extending back over the point of the bobbin, by which means the thread is prevented from getting back far enough to throw out from the shuttle. (See figures.)



Claim.—In combination with the bobbin of an ordinary shuttle, the hinged guard projecting from and over the point towards the heel of the bobbin, for the purpose of preventing the thread or yarn, when playing off too fast, from looping or tying.

No. 10,336.—John D'Homergue, of New York, N. Y.—*Improvement in Railroad Car-Brakes.*—Patented December 20th, 1853.

This invention consists in the employment of hollow sheaves attached permanently to the middle of the axles, within each of which sheaves, and detached from it, is a system of cams, moved simultaneously, and made to press against the inner periphery of the rim of the sheave, making an effectual brake.



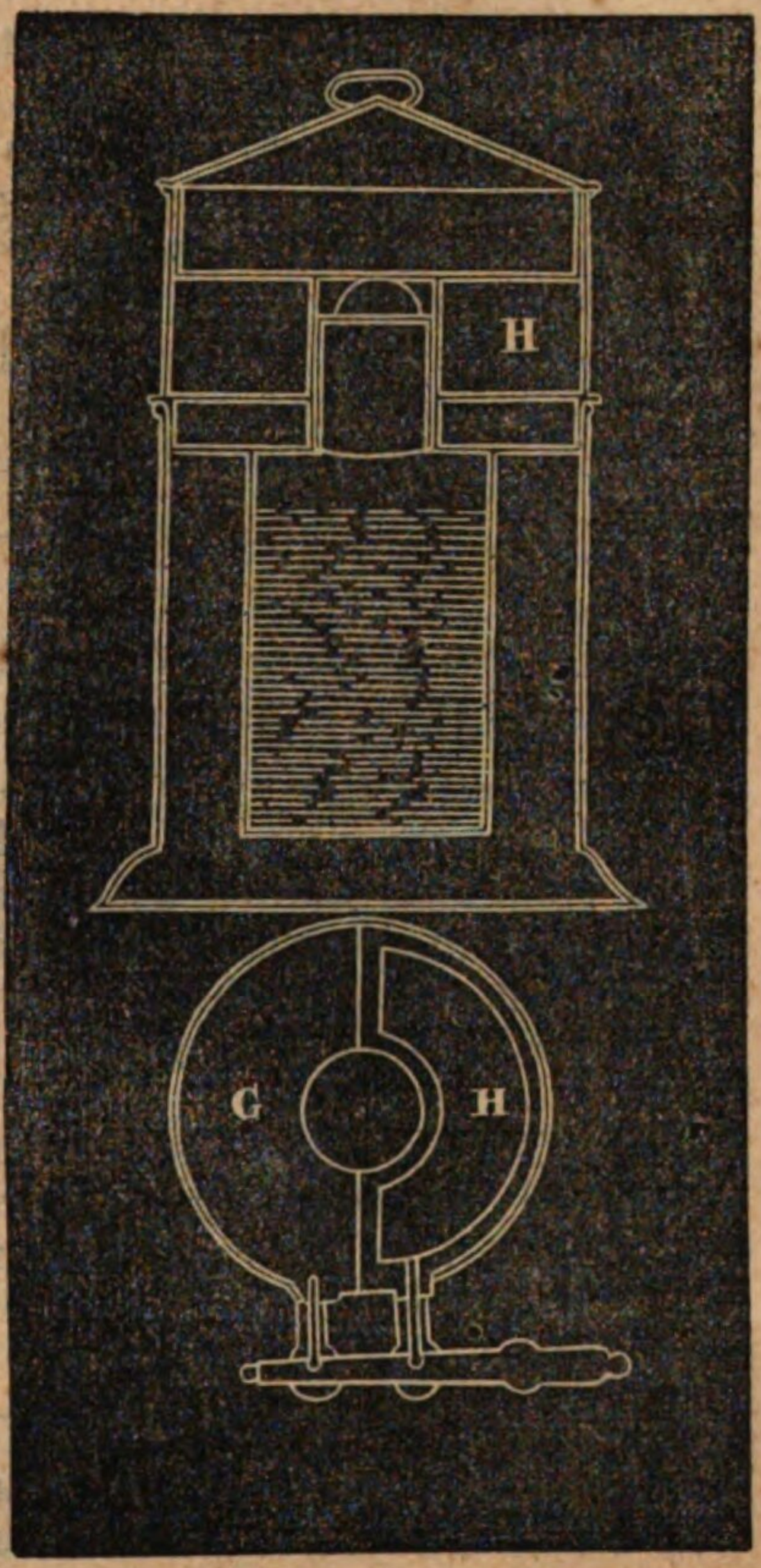
Claim.—The arrangement of the cams C, as described, upon the blocks D, and within the sheaves B, so as to press simultaneously against the inner periphery of said

sheaves by the action of the tri-branched ring R, substantially as specified.

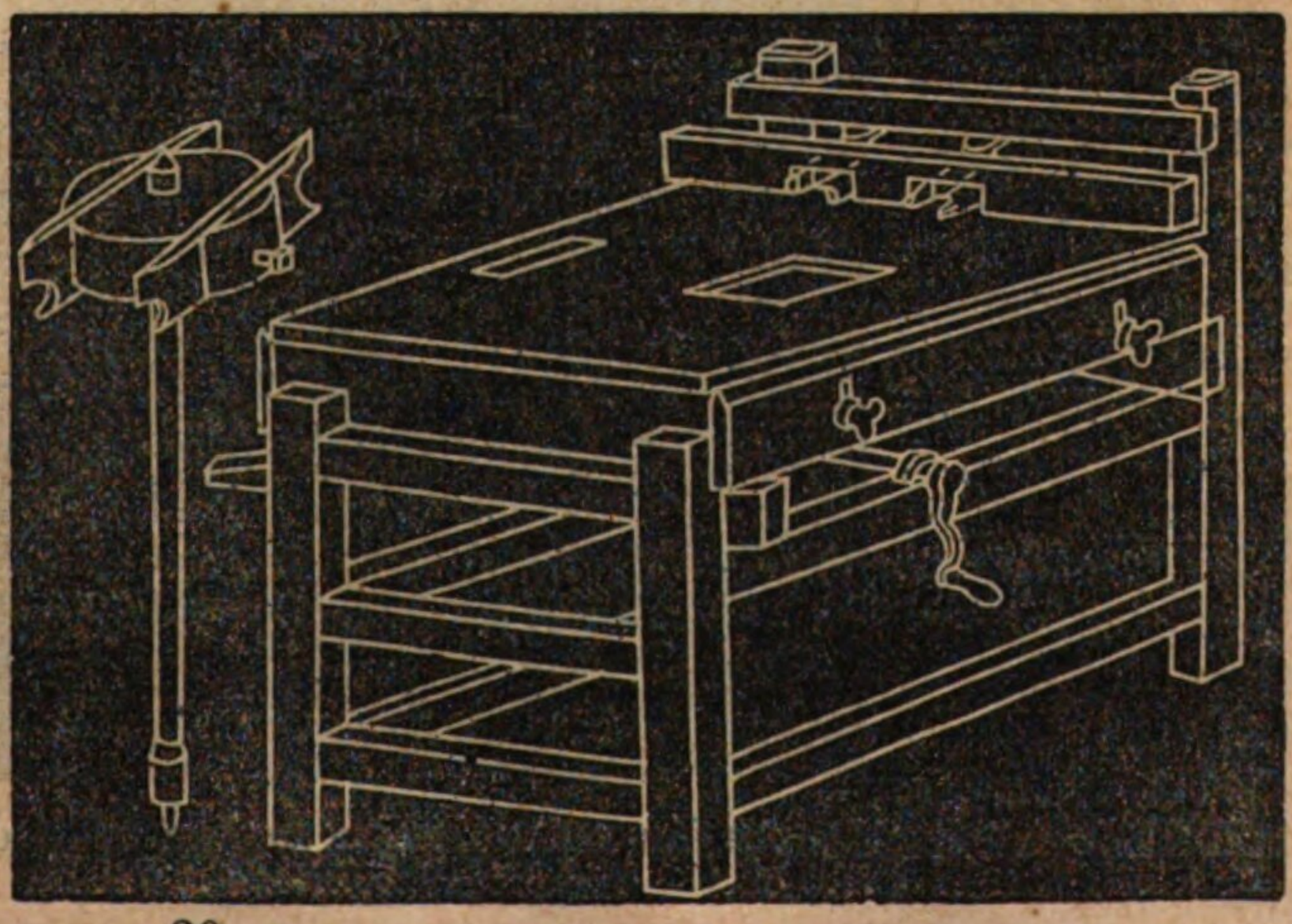
No. 10,337.—ALEXANDER FRANKENBERG, of Columbus, Ohio.—*Improvement in Soda-Water Fountains.*—Patented December 20th, 1853.

This soda fountain consists in combining with an ordinary water-cooler a vessel with two chambers, one for the acid and the other for the soda, the acid-chamber being lined with bees-wax; each chamber is supplied with a stop-cock, which stop-cocks are united together by a spigot which has a soda and acid passage in it, corresponding to the passages in the faucet; the soda and acid are let out by this apparatus, in equal quantities at the same time, into the tumbler.

Claim.—The arrangement and combination of the stop-cock apparatus with reservoirs G H, as set forth.



No. 10,338.—W. J. HATFIELD, of Dayton, Ohio.—*Machine for Jointing Table Tops or Leaves.*—Patented December 20th, 1853.



In the machine represented in the figure, the top or leaf of the table to be jointed is fed along over a bed, with its edge to be dressed bearing against a guide-strip, through which rotary cutters project and perform the work of jointing the edges of the top and leaves as they are passed in succession over the bed. The cutters turn horizontally, and are to be driven by pulleys.

Claim.—The method described of jointing and hanging tables, by means of rotary cutters, arranged and operating as specified, whereby time and labor are economized, and greater accuracy is insured.

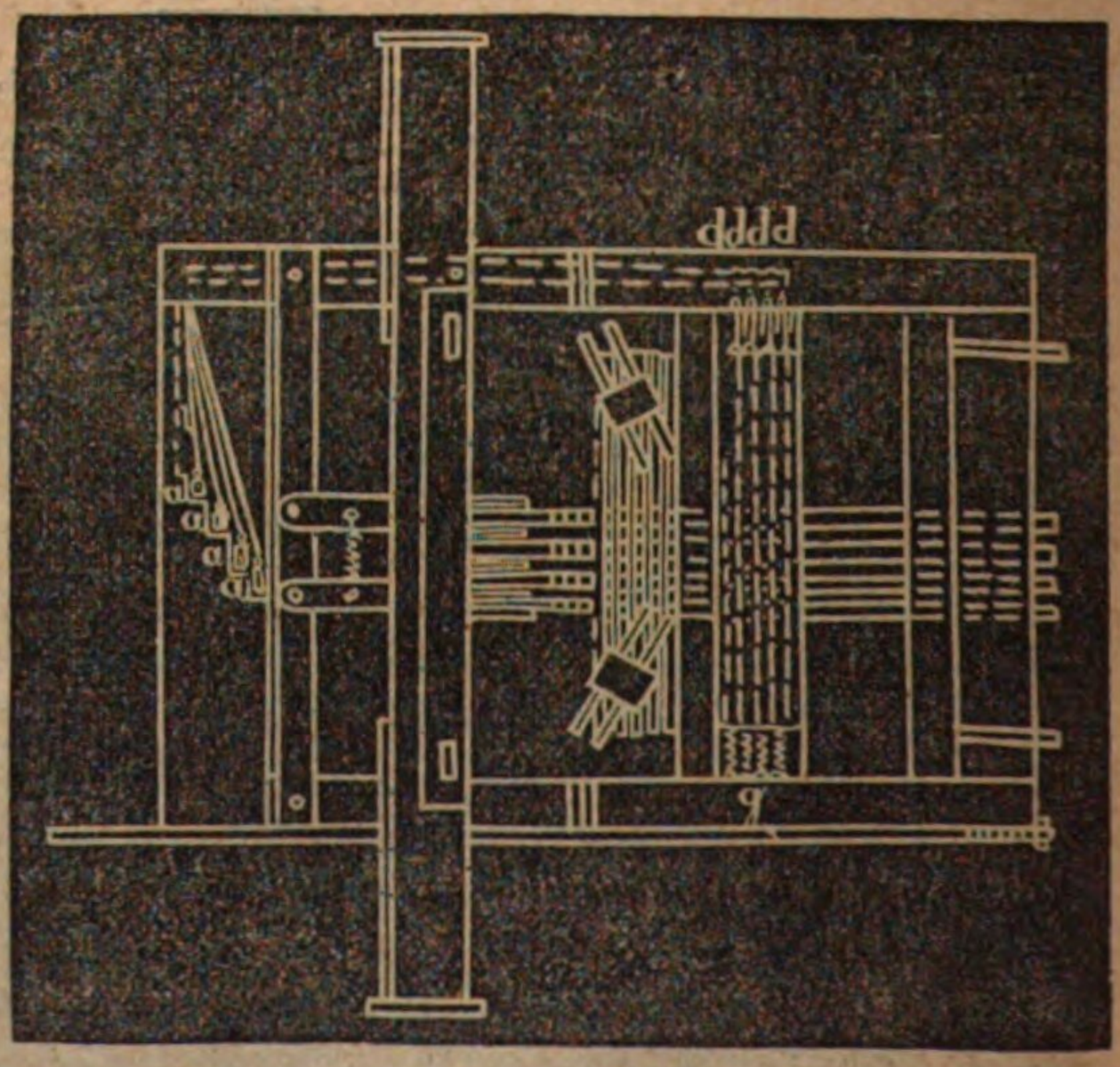
No. 10,339.—L. Otto P. Meyer, of Newtown, Conn.—*Improvement in the Manufacture of Caoutchouc and other Vulcanizable Gums.*—Patented December 20th, 1853.

The nature of this invention consists in producing, by means of oil and other fatty substance, smooth and glossy surfaces upon the material commonly known as the hard compound of vulcanized caoutchouc, or gutta-percha, or other similar gums, which may be manufactured according to the processes described in letters-patent granted to Charles Goodyear, June 15th, 1844, and Nelson Goodyear, May 6th, 1851.

Claim.—The producing of smooth and glossy surfaces upon the hard compounds of caoutchouc, and other vulcanizable gums, by means of the use of oil, or other equivalent substance, applied to the surface of the prepared gum, and between the gum and the plates of metal, or the moulds.

No. 10,340.—James A. Mitchell, of Ringgold, Ga.—*Improvement in Hand-Looms.*—Patented December 20th, 1853.

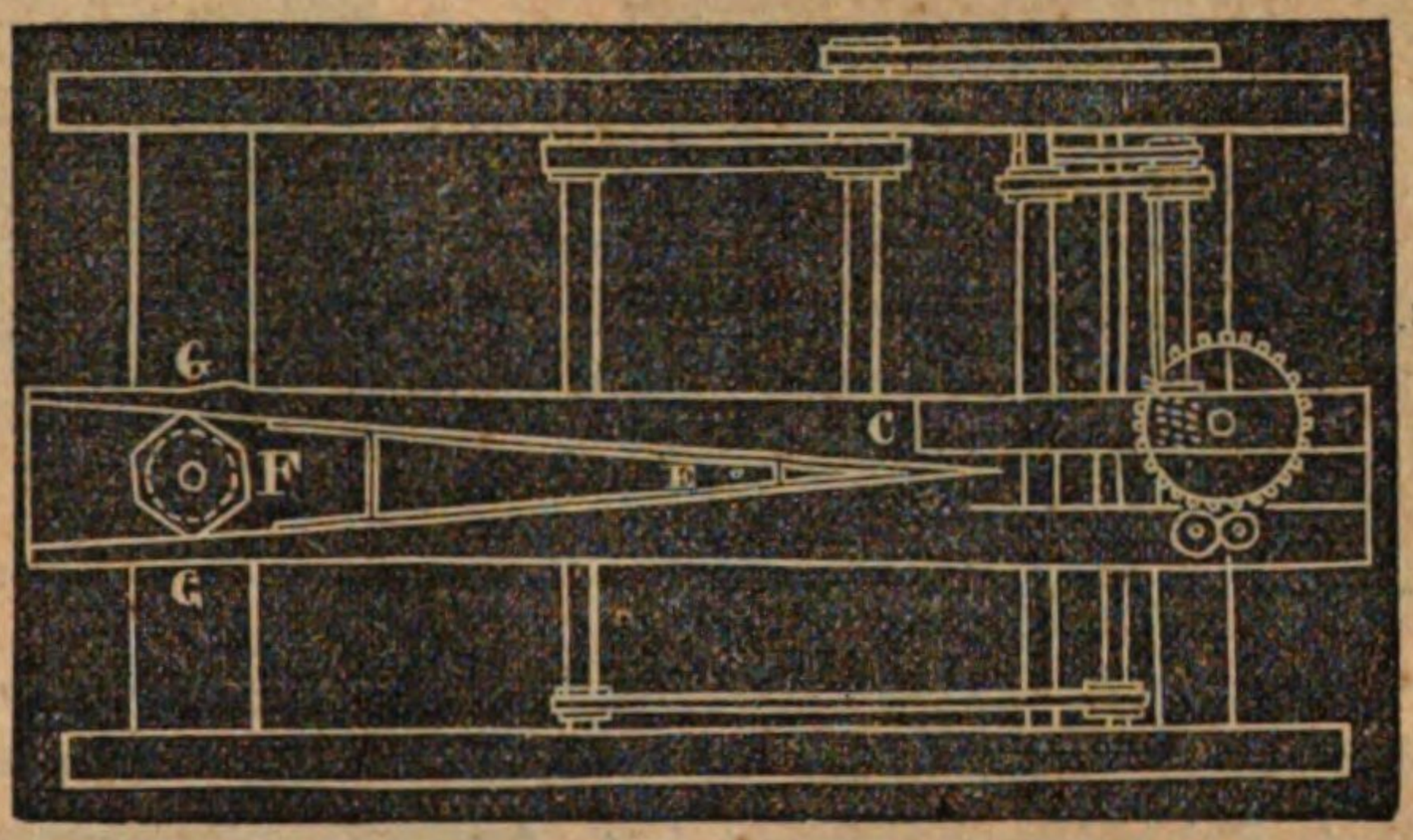
This invention consists in the employment and arrangement of suitable mechanism, whereby the heddles of hand-looms are made to operate the harness by the fingers of the operator. (See figure.)



Claim.—The combination of the keys or pegs *a a a a*, through the rods *b*, levers c, links *d*, and springs *g*, or their equivalents, with the treadles, substantially in the manner described in specification; whereby the harness of hand-looms is caused to operate by a movement of the *fingers*, instead of the *feet*.

No. 10,341.—Ephraim Parker, of Rock Island, Ill.—*Machine for Sawing and Planing Clapboards.*—Patented December 20th, 1853.

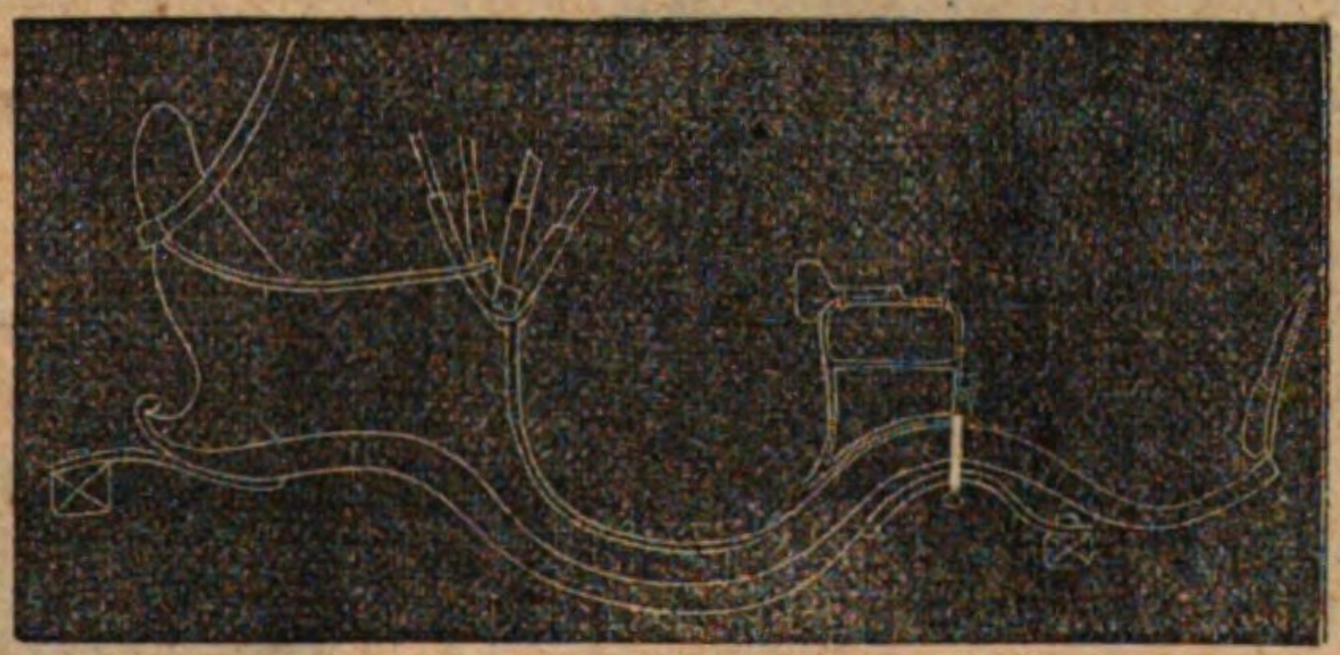
Claim.—Planing or dressing the insides of two clapboards at the same time, by means of the combination of the saw *c*, parting-guide



E, one cutter-head F, and the adjustable metallic-beds G G: the above parts being arranged and operating substantially as described in the specification.

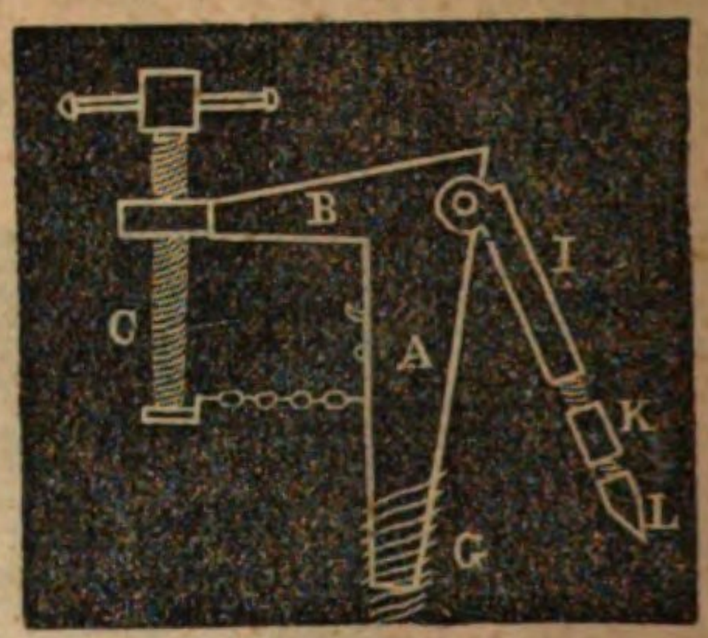
No. 10,342.—Godfrey Simon, of Reading, Pa.—*Improvement in Carriages with Shifting Seats.*—Patented December 20th, 1853.

This carriage is so constructed as to be readily converted from a double to a single seated carriage; which is accomplished by removing the front seat and foot-board, and sliding back the dash-board. (See figure.)



Claim.—The manner herein described of constructing, arranging, and applying or using the removable front seat, foot-board, and dash-board, and of adapting the body of the carriage thereto.

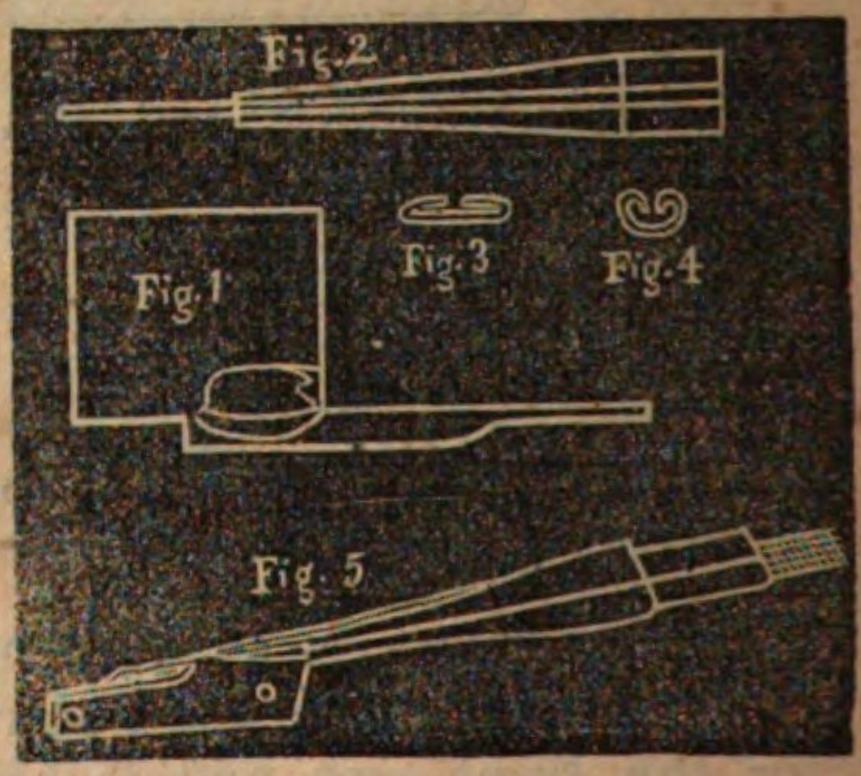
No. 10,343.—Solon Staples, of Topsham, Me.—*Screw for Planking Ships.*—Patented December 20th, 1853.



This invention consists in bringing the planks used in ship-building to their proper position for being spiked to the timbers, by the use or employment of the device shown in the figure, denominated by the inventor, a "self-holding planking-screw."

Claim.—The combination of the shank A, its arm B, and screw G, with the brace I K L, screw C, and chain M, constructed and combined in the manner set forth.

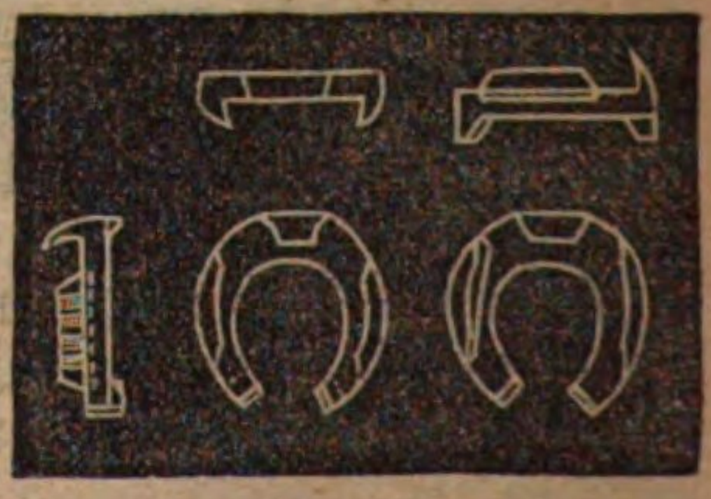
No. 10,344.—Henry L. Sweet, of Foxborough, Mass.—*Improvement in Guides for Sewing-Machines.*—Patented December 20th, 1853.



The object of this improvement is to aid in sewing on binding to hats and the like. Fig. 1 is a top view. Fig. 2, a front view. Fig. 3, its receiving end. Fig. 4, its delivery end; and fig. 5, a perspective view of the guide. This guide is to be used in sewing-machines.

Claim.—The doubling-guide, as not only made with a flat mouth, or one capable of receiving the ribbon, tape, or binding, in a flattened state, but with a bent channel or sides, such as shall gradually bend or double it, and discharge it at the other end in a doubled state, ready to be applied to any article conveniently placed to receive it, and leave it sewed thereon.

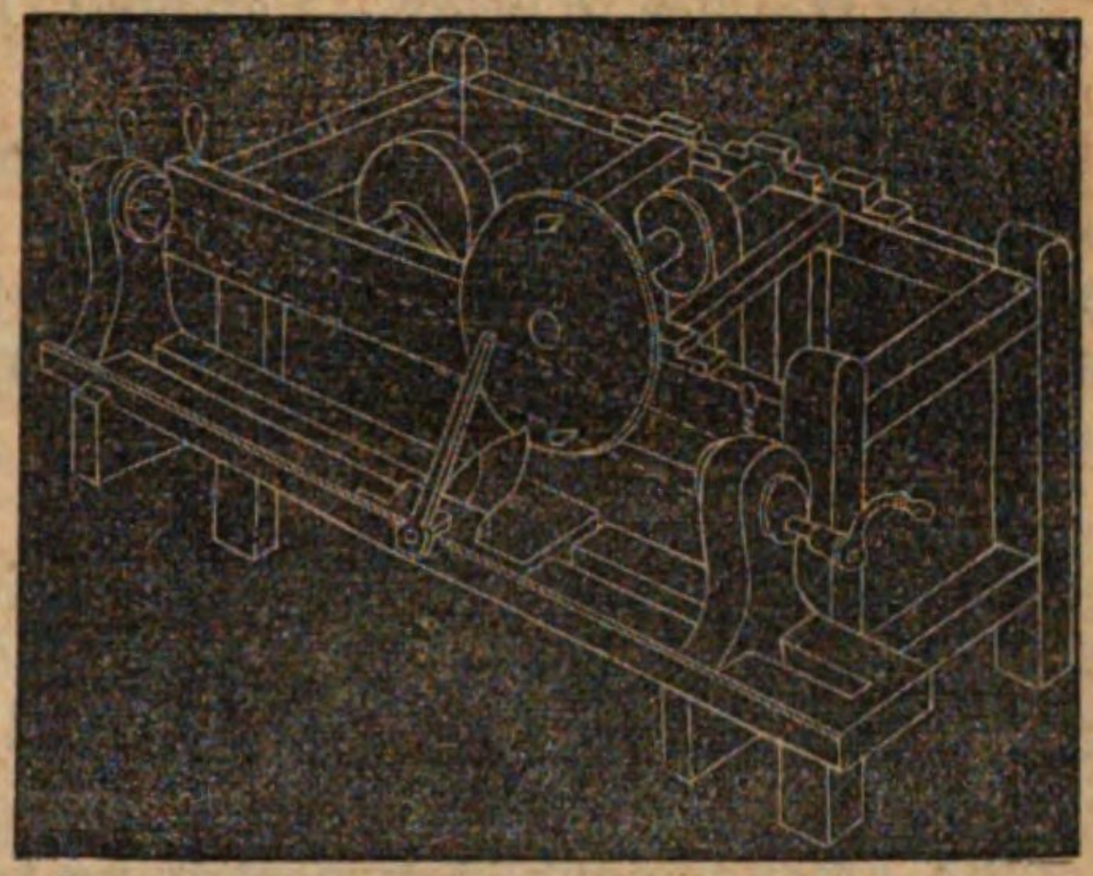
No. 10,345.—William H. Towers, of Philadelphia, Pa.—*Improvement in Horse-shoes.*—Patented December 20th, 1853.



The nature of this invention consists in making the shoe with inclined flanges or lips, rising from the front and sides of its upper surface, corresponding in form with the parts of the hoof against which they are caused to bear, when fitted to the horse. One of the side flanges is made separate from the shoe, and fastened to it by sliding the base of the flange into a corresponding recess in the side of the shoe, the base being secured by a screw passed through it and the shoe.

Claim.—Constructing the shoe with a detached flange, secured substantially as described, so that the side and front flanges shall firmly fasten the shoe (without the aid of nails) to the hoof.

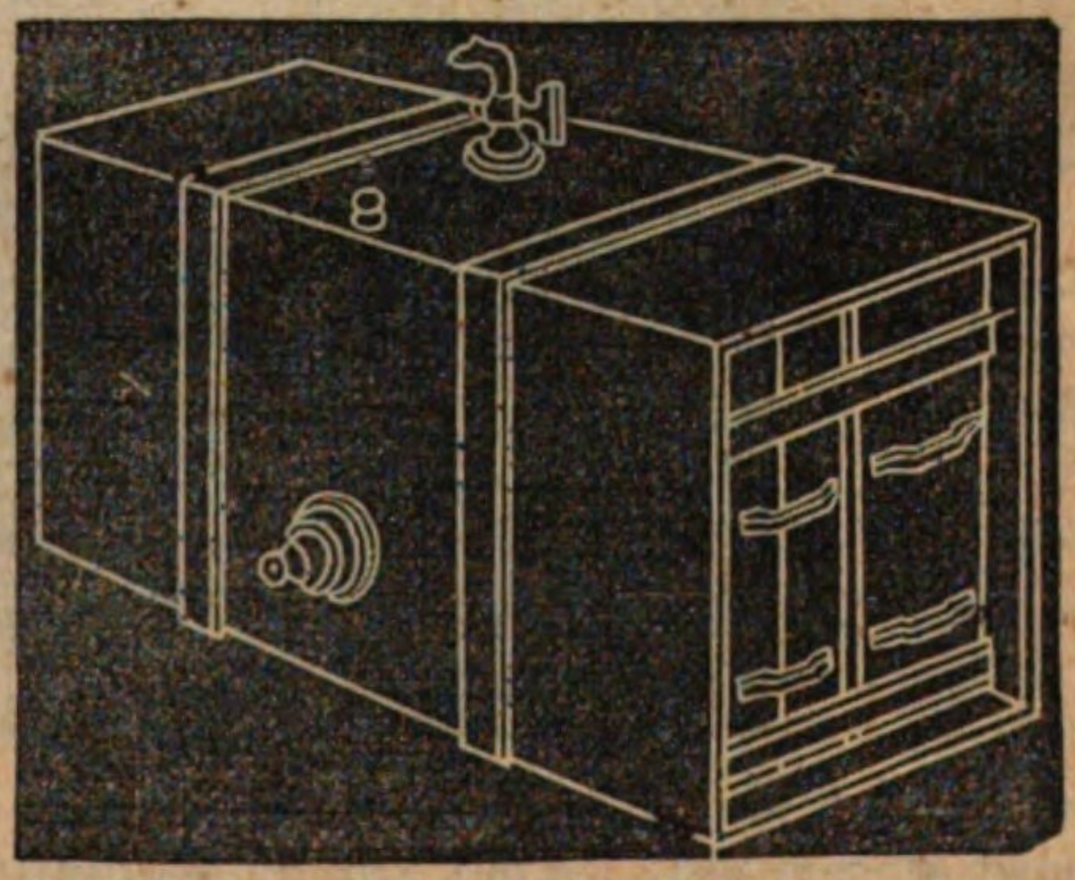
No. 10,346.—ELIAS UNGER, of Dayton, Ohio.—*Machine for Dressing Timber for Cabinet Purposes.*—Patented December 20th, 1853.



The object of this machine is dressing timber to various forms, suitable to cabinet-ware; and consists in the employment of a slotted table, carrying standards for holding timber in the desired position, while the table is moved longitudinally, so as to bring the material against the cutters of a rotary face-plate; the standards being furnished with eccentric points for securing the timber at the proper angle for the dress required.

Claim.—Securing the timber to be dressed between two clamps, on traversing carriages, by means of "eccentric pins," so that the faces or surfaces dressed by the cutter may have any desired angle with the axis of the piece, for the purposes and in the manner set forth.

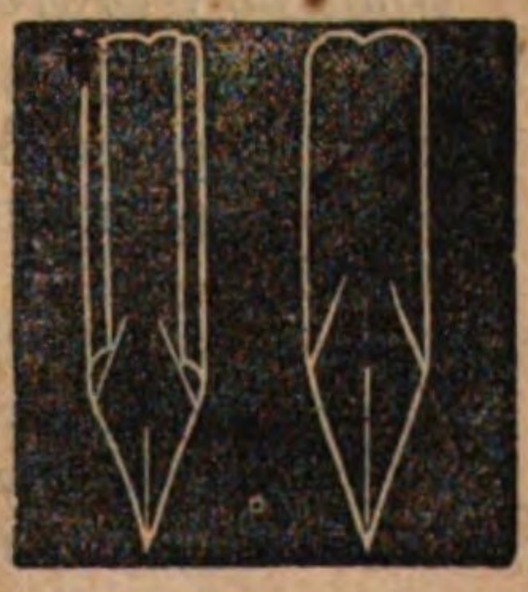
No. 10,347.—WILLIAM WISDOM, of Cleveland, Ohio.—*Improved Mode of Cleansing Hair for Beds*, &c.—Patented December 20th, 1853.



The figure represents a chamber, in which hair or feathers are subjected to a vapor-bath of chlorine gas. The material is first washed in clear water, and then drained, and afterwards washed in a solution of sal soda.

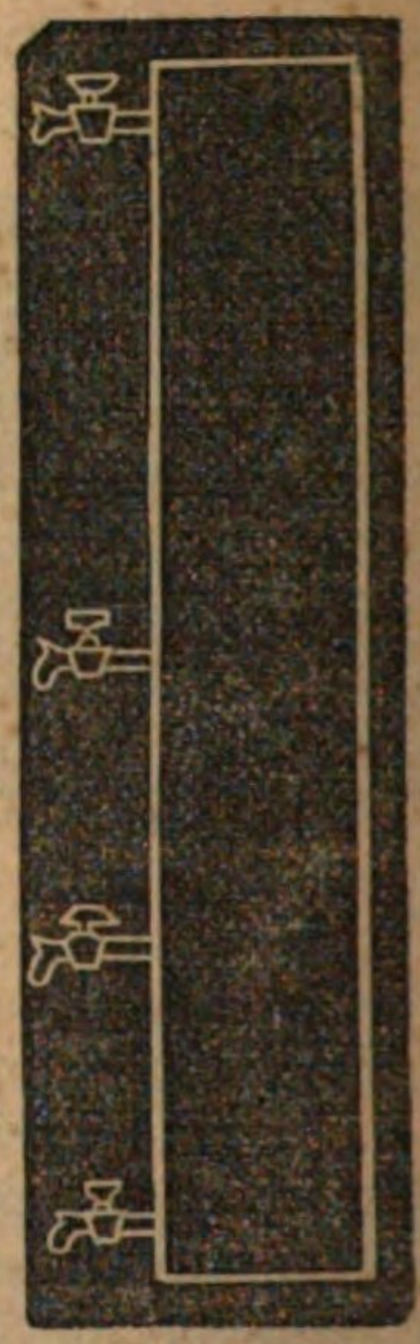
Claim.—Purifying hair and feathers by destroying all noxious insects or infectious matter contained therein, by subjecting the same to a vapor-bath of chlorine gas, after the material has been cleansed by a bath of sal soda.

No. 10,348.—EDMUND H. BARD and HENRY H. WILSON, of Philadelphia, Pa.—*Improvement in Gold Pens.*—Patented December 20th, 1853.



Claim.—The construction of metallic pens, having the form of the semi-cylindrical barrel, combined with the angular diverging planes, by compressing the metal between correspondingly shaped dies.

No. 10,349.—B. F. GREENOUGH, of Cincinnati, Ohio.—*Improvement in Separating Alcohol from Water and other Heavier Fluids.*—Patented December 20th, 1853.

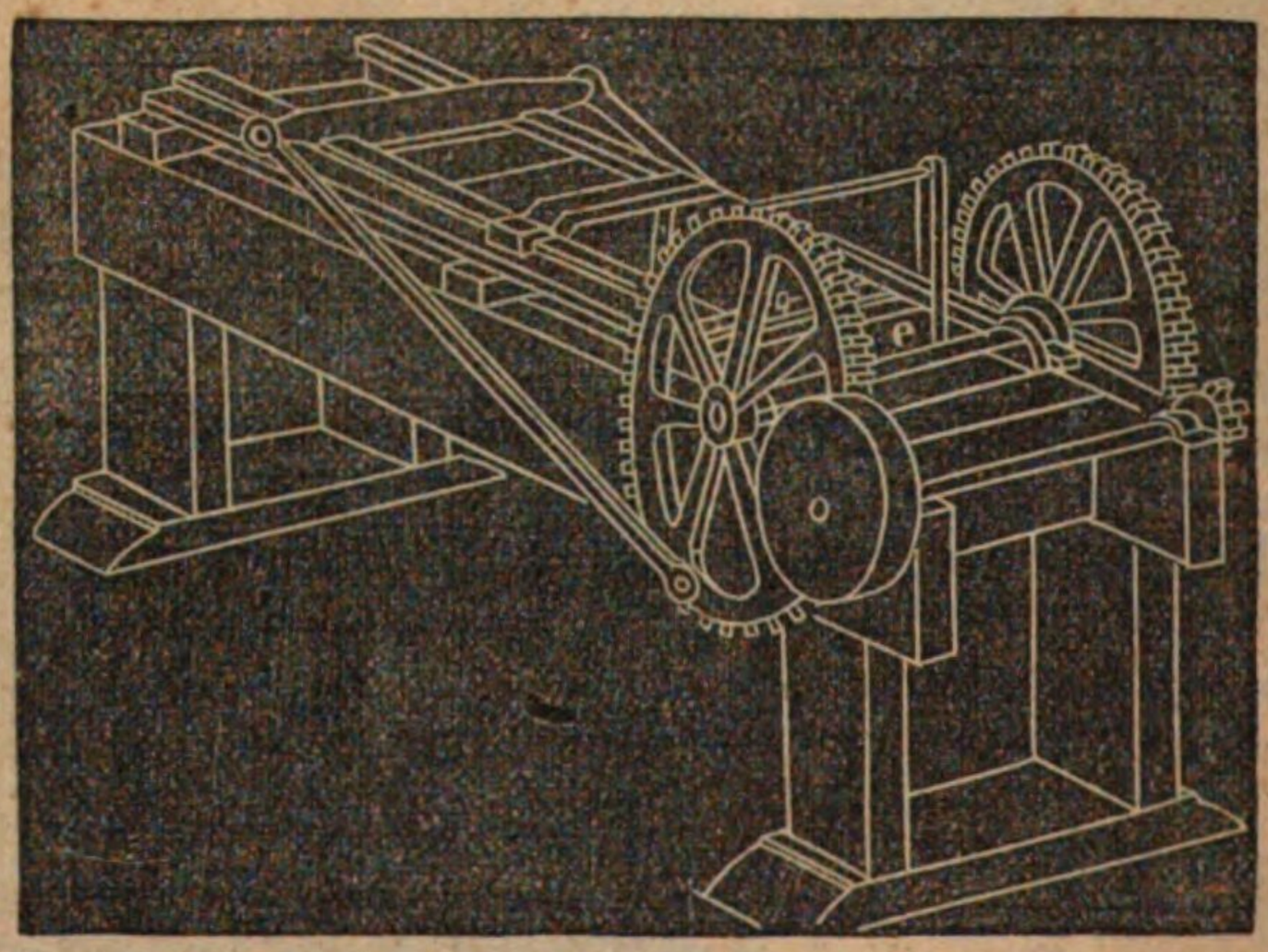


Claim.—The separating of alcohol and its compounds of parts of different specific gravities, by means of the pressure of a column of such liquids, thereby causing what the inventor denominates "hydrostatic displacement."

No. 10,350.—BENJAMIN F. STEVENS and WALTER KIDDER, of Lowell, Mass.—*Improvement in Shingle-Machines.*—Patented December 20th, 1853.

The principal feature of this improvement consists in the arrangement of two shaving-knives *o e* in a reciprocating frame; the lower knife being so arranged as to be raised, by means of cams, on the main-shaft, so as to taper the shingle gradually, and in a more perfect manner than by the machines heretofore in use.

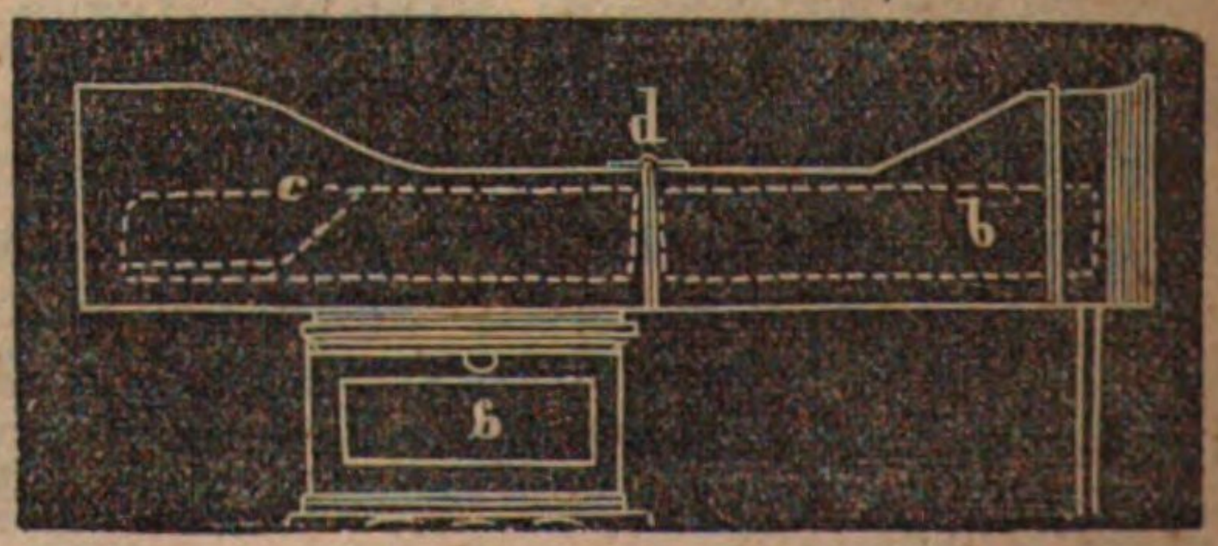
Claim.—The combination of the movable side-bars



with the shaving knives and cams, arranged and operated as shown and described. Also, the combination of the sliding-arms carrying the riving-knife with the driver, for the purposes specified.

No. 10,351.—ANDRES E. BOTTER, of New York, N. Y.—*Improved Folding Wardrobe Bedstead.*—Patented December 20th, 1853.

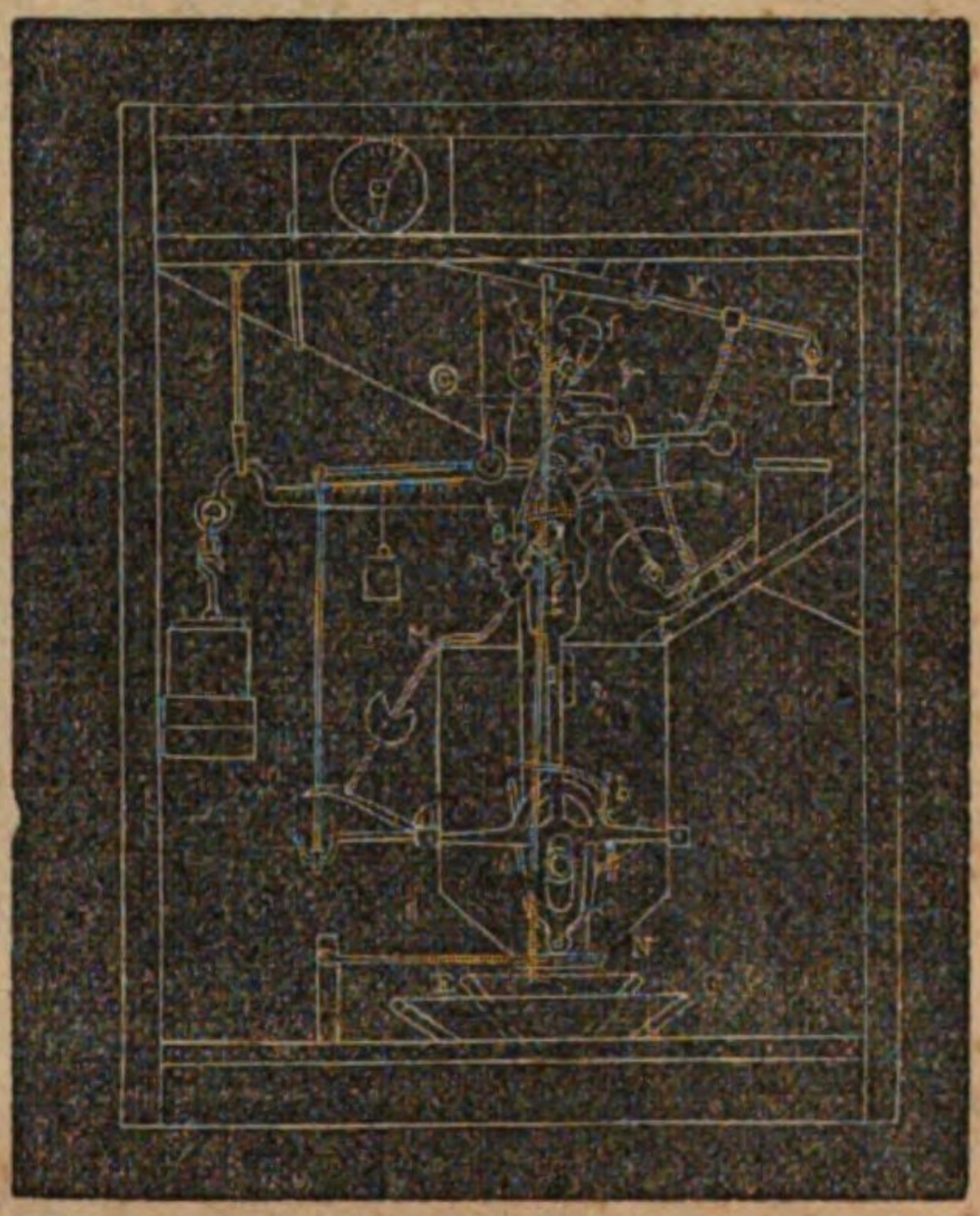
By reference to the annexed figure, the claim will explain this improvement.



Claim.—The peculiar construction of the bedstead, having the two parts *b c* connected by hinges, connected to a chest A by

hinges *e*; by which construction the bedstead may be folded or shut up during the day, occupying but little room, and resembling a piece of room furniture, and unfolded at night when desired for use. The chest A being provided either with drawers, or a crib for children.

No. 10,352.—ISAAC D. GARLICK, of Lyons, N. Y.—*Self-acting Apparatus for Weighing Grain and Making a Record of the Weight.*—Patented December 20th, 1853.

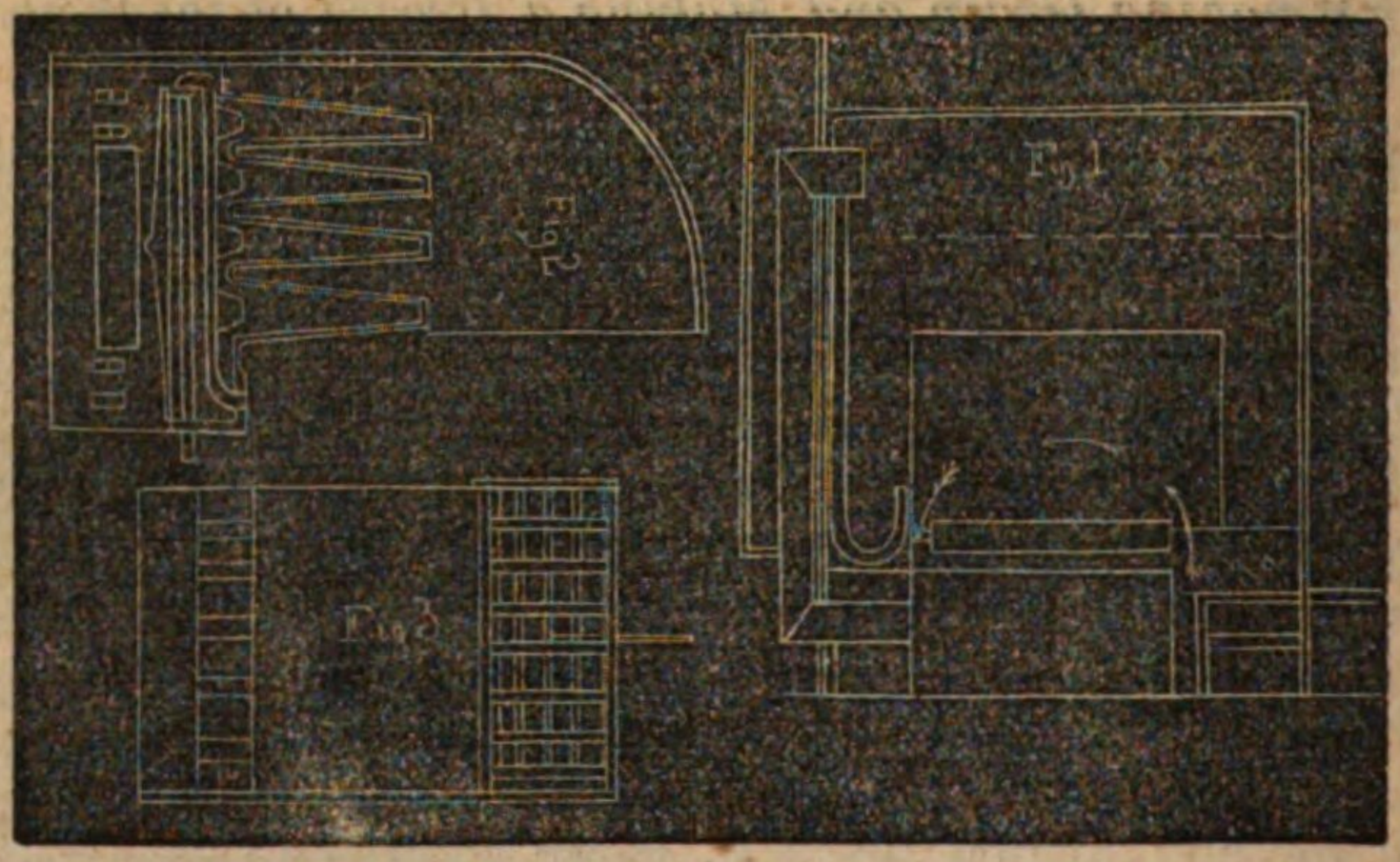


Claim.—The auxiliary-gate *b*, when combined with the loaded bent lever *u* and cam-catch *q*, or their equivalents, which act upon the steelyard so as to lift it shortly before the weight of grain in the weighing-box becomes sufficient to raise it, substantially in the manner set forth in the specification. Also, suspending the weighing-box C in the frame D, by means of the rack *l*, pinion *m*, and loaded lever M, whereby it is made to slide up and down within said frame at each weighing, and to produce the movements described in specification. Also, the arrangement and combination of the bent cam-lever *b'*, the pin *c'*, on the frame D, and the curved elastic rod *a'*, connecting the lever with the lid N, for the purpose of opening the lid at each descent of the weighing-box, within the frame D, and then closing it by the ascent thereof. Also, the suspended hopper E, in combination with the vibratory lever K. Also, the combination of the notches *h k* and catch-wire *j* with the elastic shoe *g* and pin *i* of the lever *f*, arranged in such manner that said lever is successively set free from the notch *h*, catch *j*, and notch *k*, respectively by the ascent, descent, and second ascent of the steelyard. Also, the adjustable cam-catch *o*, in combination with the shouldered-rod Q, for the purpose set forth. Also, the slotted-rod *v*, in combination with the vibratory lever K, when arranged in such a manner that the ascent of the lever will raise the gate *b*, and hook the catch *q* over the pin *p* of the steelyard, but will not disturb the gate in its descent. Also, the arrangement and combination of the adjustable notched and perforated disk *d''*, the coupling-pins *s''* and *t''*, index *m''*, arm T, and stop *t'*.

No. 10,353.—CHARLES F. SIBBALD, of Philadelphia, Pa.—*Improvement in Steam-Boilers.*—Patented December 20th, 1853.

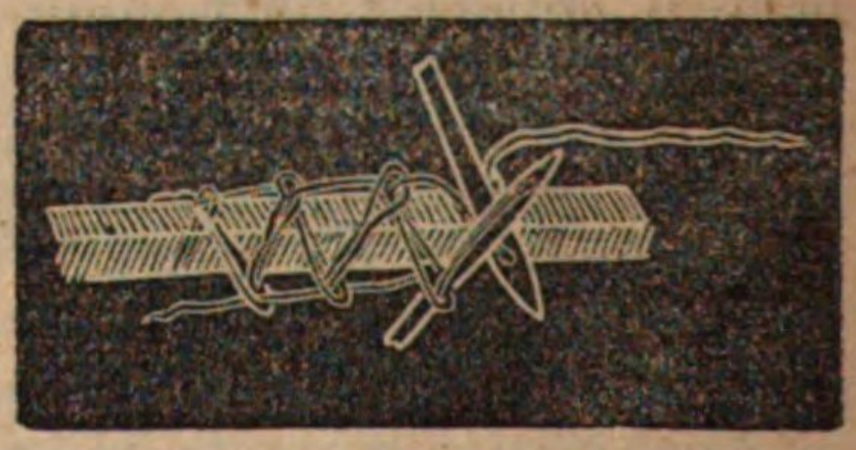
This invention consists in a certain arrangement of flue and water

spaces of a certain form, in connection with the arrangement of the fire-chamber, so as to obtain a great surface for the rapid development of steam, and a great saving of fuel; also in the mode of putting together the plates composing a boiler, of such form and arrangement as to make a very tight and strong boiler; and in an arrangement for circulation. This last-named improvement, the inventor denominates the "Condensed Plate-boiler."



Claim.—The fire-box, deflecting-plates, fire-surface, and water-surface, as constructed and arranged. Also, the additional steam-chamber placed below the water-surface and behind the fire-box, and connected to the main steam-chamber by a pipe passing through the smoke-stack.

No. 10,354.—SHERBURNE C. BLODGETT, of Georgetown, Mass.—*Improvement in Sewing-Machines.*—Patented December 20th, 1853.

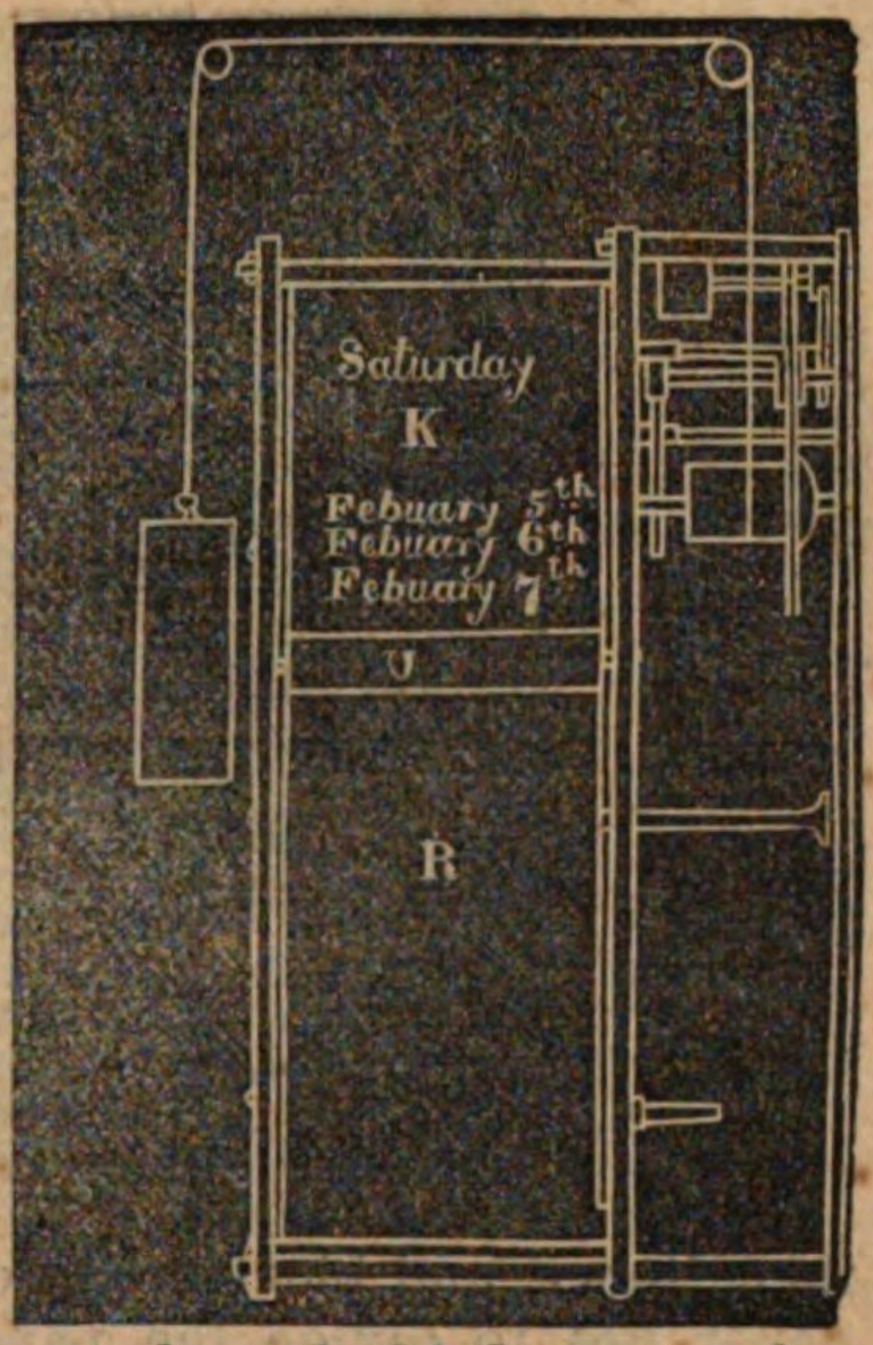


By reference to the figure, the claim will explain the nature of this invention.

Claim.—The formation of a seam in cloth or other material, by the interlooping of two threads, by the conjoint action of two needles in such manner that each needle shall be made to carry a loop of thread through a loop formed by the other needle, and through the cloth, whereby one thread serves as a binding-thread to the other.

No. 10,355.—WILLIAM H. AKINS, of Ithaca, New York.—*Improvement in Machines for Registering Time.*—Patented December 20th, 1853.

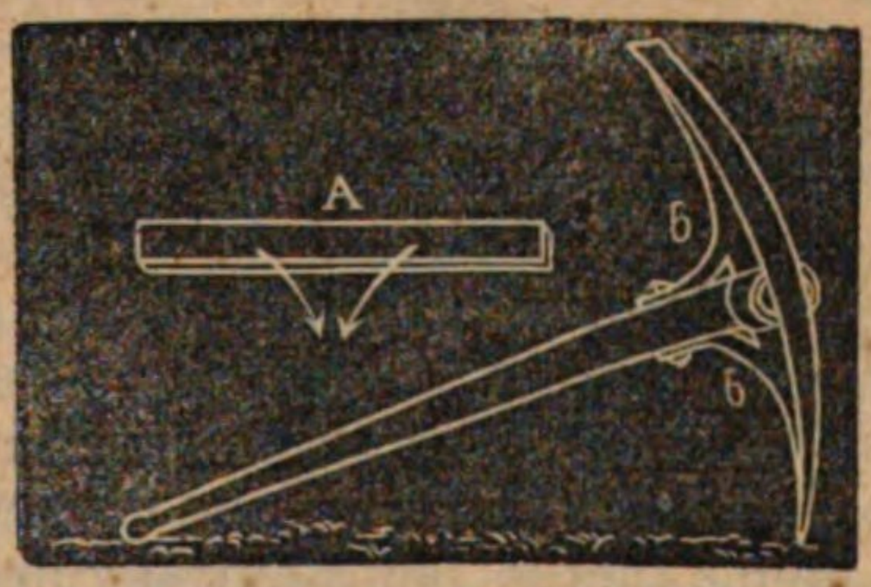
To give a full description of the operation and arrangement of this machine, would require too much space for this Report.



The object of this invention is to register days, months, and years, as well as hours, minutes, and seconds.

Claim.—The particular arrangement of the months, with their appropriate number of days, on the paper R, and for the purposes described in the specification, commencing February 1st, February 2d, and so on for twenty-eight days only, and then all of the other months in their regular order, with their appropriate number of days for the whole year (with the February first mentioned having twenty-eight days). Then again, February having twenty-nine days, and also eight or ten days of another March, at the last end of the paper R, and within which eight or ten days the machine must be wound up in every bissextile year, and requiring to be wound up in the first, second, and third years after leap-year during February having twenty-nine days, and before the twenty-ninth day thereof. Also, the arrangement and combined action of the rollers K and L, showing the day of the week, and drawing up the paper R, exhibiting the month and days of the month in their regular order; the paper after it is drawn between the rollers K and L, being disposed of by winding it upon the roller S, by means of a weight or spring.

No. 10,356.—John C. Concklin, of Peekskill, N. Y.—*Improvement in Pick-axes.* — Patented December 20th, 1853.

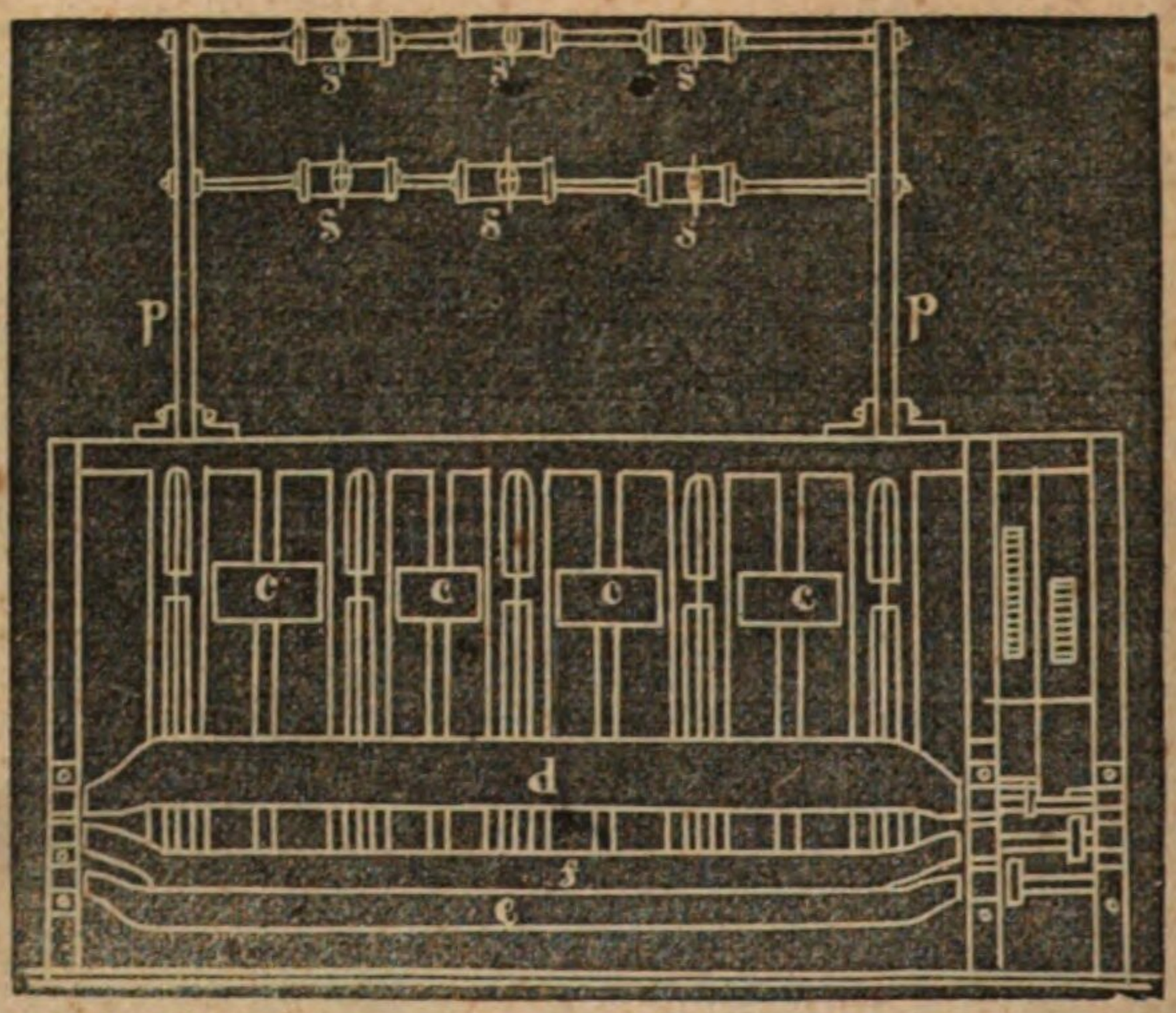


Claim.—The combination of the bar A with the braces *b b* and the loops *c c*, substantially in the manner set forth.

No. 10,357.—William A. Martin, of Brooklyn, N. Y.—*Machine for Folding Seidlitz-Powders.*—Patented December 20th, 1853.

The powders are first parcelled out upon papers, and then subjected to the action of the machine, which cuts the papers and folds them, ready to be packed in boxes.

Claim.—The bars *d e* and *f*, moved by the means herein shown, or any analogous device, for folding the paper. Also, the frame *p*, with



its cutters *s*, and blocks *r*, in combination with the beds on which the paper lies, to divide the papers containing the powder, and fold the ends against the ends of the blocks *c*, as specified.

LIST OF RE-ISSUES AND CLAIMS FOR 1853.

No. 229.—*Improvement in Apparatus for Discharging Water from the Holds of Vessels.*

I claim the combination of a system of two series of chambers, connecting-pipes, discharging-pipe, receiving-hole or orifice, and ventilating-pipes, as arranged, connected, and applied to the hold of a navigable vessel, and made to operate during the rolling or pitching movements thereof, substantially in manner and for the purpose of elevating and discharging water therefrom, as set forth.

NEHEMIAH HODGE.

No. 230.—*Improvement in Excluding Dust from Railroad Cars.*

I claim, and desire to secure by letters patent, inducing outward currents of air through the windows of railroad cars, to prevent the entrance of dust, &c., by the action of the surrounding air on deflectors, combined with the sides of the car, substantially as specified, and operating on the principle set forth.

E. HAMILTON.

No. 231.—*Improvement in the Mode of Operating Brakes for Cars.*

I claim an improvement in actuating the brakes of a car having two trucks, that is to say, a combination of two levers *f f*, a rod *h*, two levers *c c*, and rods *d d*, as applied to the brakes and two windlasses of the car, and operated by either of the windlasses, so as to bring down at the same time the brakes of both trucks upon the wheels thereof with the same, or practically the same, degree of force, and whether, when the car is running on the railway, the axles of one truck, or of the wheels of one truck, are thrown or moved out of parallelism with those of the other truck, or the rubbers or brakes become unequally worn, or of an unequal thickness, as stated.

NEHEMIAH HODGE.

No. 232.—*Improvement in Splints for Fractures.*

I claim and desire to secure, by letters patent, the cutting out a portion of the splint, to afford an opportunity for dressing as often as may be necessary, the upper and lower portions of the splint being kept firmly united by means of the brace B, so as, by extension and counter extension, to keep throughout the treatment the proper relative position of the parts concerned, the slide being replaced after each dressing, or any other device substantially the same.

ADAM HAYS.

No. 233.—*Improvement in Self-acting Mules for Spinning.*

I claim and desire to secure, by letters patent, governing the revolution of the spindles in winding the yarn on the cop, and also in backing off during the progressive stages of the building, by means of a cam B, or any equivalent device of irregular form, circumferentially, with the said irregularity, varying from end to end; the said cam, or equivalent, being caused to operate upon the mechanism which drives the spindles in any way that will produce the result set forth. I also claim the mechanism for causing the finger *d*, through which the irregular surface of the cam B, or its equivalent, acts upon the mechanism which drives the spindles, in backing off and building on, to traverse the said cam, and to be kept close to its surface, consisting of the screws *e* and K, the nut *j*, cord or chain *f*, lever G, and stud *h*, operating in combination, in the manner substantially as set forth.

WANTON ROUSE.

No. 234.—*Machine for Arranging and Feeding Screw-Blanks.*

I claim and desire to secure, by letters patent, the lifters which select and lift the blanks, etc., from the hopper, substantially as specified, in combination with ways or conductors, or the equivalents thereof, substantially as specified, into or on to which the blanks, etc., are transferred, as specified. I also claim giving to the lifters, or to the inclined ways, or their equivalents, a lateral motion, in combination with

a stop or detector, substantially as specified, for the purpose of arresting the operation of the lifters until a further supply is required, as specified. I also claim the sliding-carrier, with its recess for receiving and holding the screw-blanks, substantially as specified, in combination with the spring-fingers, substantially as specified, for taking the screw-blanks from the carrier, and presenting them to the jaws, as specified.

THOS. J. SLOANE.

No. 235.—*Improvement in Machinery for Trimming Books, &c.*

I claim the turning and adjustable book-holder, arranged as described, so as to be made to assume either of the three positions specified, and so that the three edges of a book may be trimmed by a single adjustment of the same in said holder, and by the movement of said holder on its pivot consecutively to each of the aforesaid three positions, whether such holder be combined with a reciprocating knife or cutter having any other shape or motion. I also claim the adjustable frame F, in combination with the turning book-holder, or the turning and adjustable book-holder, for the purpose specified. I also claim the combination of the table (on which the book-holder is supported), arranged so as to be gradually raised to convey the edges of the book to the knife, with a reciprocating knife, or any other knife or cutter having any other shape or motion.

LARNARD F. MARKHAM.

No. 236.—*Improvements in Movable Breeches for Fire-Arms, and Appurtenances of the same.*

I claim and desire to secure, by letters patent, in combination with a hinged breech-piece, the support G, the slot Y, and lever L, whereby the said breech-piece is easily moved into and out of place, in closing and opening the gun for the purpose of loading, swabbing, &c., substantially as described. I also claim, in combination with a gun having a dissected screw-breech, the flanged shield through which the cartridge is made to pass into chamber over the dissected screw, without danger of being broken by the ends and edges of the threads, as set forth. I also claim, in combination with a rammer for charging guns at the breech, the projecting central point *n*, whereby the cartridge, in being driven to its place in the chamber, is perforated at its base, to receive the point of the percussion-cap described, for the purpose of insuring the ignition of the gunpowder, as set forth. I also claim the enlargement *x*, near the shoulder *s'*, of the rammer, whereby the shield through which the cartridge has been rammed is made to adhere by friction to the rammer, and to be drawn out of the breech of the gun without requiring a separate operation for taking it out.

B. CHAMBERS.

No. 237.—*Improved Cannon-Lock.*

I claim and desire to secure, by letters patent, the method of secu-

ring the lock to the gun by means of the sectional or quarter screws *t t'*, for the purpose of speedily opening or removing the lock, to supply it with the cap, pellet, or other material by which the gunpowder is ignited, and for firmly holding the same in place on the gun when it is to be discharged, substantially as described. I also claim forming the gun-lock in such a manner that the hammer-rod and the percussion-rod shall be in separate pieces, lying axially within the same barrel, whereby the coiled main-spring is made to urge the hammer-rod against the head of the percussion-rod to discharge the piece, and the recoil-spring on the percussion-rod is made immediately to draw back and hold the valve which closes the interior of the lock against access of smoke and gases, as set forth.

B. CHAMBERS.

No. 238.—*Improvement in Reaping-Machines.*

I claim and desire to secure, by letters patent, placing the cutter-bar and cutters lower than the frame of the machine, and opposite the side of the plane of the wheel, in such a manner as to leave unobstructed space below the frame, and also between the wheel and the cutters, with their supports, to allow the machine to pass freely and without clogging over the cut grass or grain, as set forth. I also claim placing the cutters lower than the frame and axle, and in, or nearly in, the same vertical plane with the axle on which the frame hangs and vibrates, and parallel, or nearly so, to said axle, so that the vibrations of the frame on uneven ground shall not materially elevate or depress the cutters, as set forth. I also claim the endless chain of cutters, in combination with the guard-teeth, operating substantially as described.

WM. F. KETCHUM.

No. 239.—*Improvement in Reaping-Machines.*

I claim and desire to secure, by letters patent, placing the gearing and crank forward of the driving-wheel, for protection from dirt, &c., and thus carrying the driving-wheel further back than heretofore, and sufficiently so to balance the rear part of the frame and the raker thereon, when this position of the parts is combined with the sickle back of the axis of motion of the driving-wheel by means of the vibrating-lever, substantially as described. I also claim the combination of the reel for gathering the grain to the cutting-apparatus, and depositing it on the platform with the seat or position for the raker, arranged and located as described, or the equivalent thereof, to enable the raker to rake the grain from the platform, and deliver and lay it on the ground at the side of the machine, as described.

C. H. MCCORMICK.

No. 240.—*Improvement in Cooking-Ranges.*

I claim the improvements by which the hot-water back is connected with the plate G, and by means of which said hot-water back may be

either readily removed at any time, or applied in such manner that the directions of its water-pipes may be disposed so as to accommodate the bath-boiler into which they are usually led, on whatever side of the range the said bath-boiler may be placed; the said improvements consisting, first, in the connecting-piece H, and the attachments of it, and the hot-water back; the whole being made to operate together substantially in the manner set forth. I also claim a second set of attachments (fixed on the opposite face of the water-back), in combination with the first set thereof, as described. I also claim the peculiar arrangement of the flues which lead the smoke and volatile products of combustion directly around the oven, the said arrangement of flues causing the heat to course against a portion or one half of the bottom of the oven, next into another flue, which takes it backwards and against the other portion or half of the bottom of the oven, thence up a flue against the oven, thence through a flue extending over and against a portion or half of the top of the oven, thence into and through another flue, which carries it backwards and over and against the top of the oven, and conveys it to the chimney or discharge flue. I also claim the two recesses *l m*, and two flue-plates *p q*, applied to the plate K, in combination with the two valve-openings X A′, their damper, and cover-plate, as applied to the top-plate of the oven-frame, and used under an arrangement of oven-flues, substantially as described, the same allowing of the adaptation of the oven to either side of the fire-place, or the use of two such ovens and their frames in connection with the fire-place, all essentially as stated. I also claim the improvement by which the oven can be raised and readily removed, and by which the smoke is prevented from passing underneath the partition which separates the flues on top of the oven, the same consisting in the sliding or gravitating plate G affixed to the partition, and made to operate substantially in the manner specified.

MOSES POND.

No. 241.—*Improved Lubricating Compound.*

I claim and desire to secure, by letters patent, the combination of a solution of caoutchouc, or other similar gum, with animal or vegetable oil, or fatty matter, substantially as specified, applicable as a substitute for oil in lubricating machinery, and for other purposes.

PATRICK S. DEVLAN.

No. 242.—*Improvement in apparatus for operating Shuttle-Boxes of Looms.*

What is claimed therein as the invention of the said Robert Burns Goodyer, is the employment, for the purposes of weaving, of an index-plate, having movable and adjustable pins, projecting at different distances from the face of said plate, in combination with the shoe H or its equivalent, having projections corresponding to the different length of pins, for the purpose of raising and falling the shuttle-boxes

to correspond with the pattern desired to be formed. The whole constructed and arranged in the manner herein described.

JAMES A. BOWIE.
CHARLES CARR.

No. 243.—*Improvement in Machinery for making Mouldings.*

What I claim as new, and desire to secure by letters patent, is: First, The combination of a ring or rings with a cutter or cutters for operating on an angular strip for making a moulding, whether the said cutter or cutters be rotating or stationary, or both, and whether the said cutter or cutters operate on the face or on the edge of the strip, or on both the face and the edge, substantially as herein described; and, Second, The combination of the adjustable bed with the ring or rings and a cutter or cutters as aforesaid, for operating on an angular strip for making a moulding; whether the cutter or cutters be rotating or stationary, or both, and whether the said cutter or cutters operate on the face or on the edge of the strip, or on both the face and the edge, substantially as described.

ALFRED T. SERRELL.

No. 244.—*Improvement in Gas-Regulators.*

What I claim as my invention, and desire to secure by letters patent, is balancing the varying pressure of the gas in the main by connecting with the valve a disk which receives pressure from the main, to balance the pressure on the valve, substantially as described, or the equivalent therefor, in combination with the method, substantially as described, of governing the aperture through which the gas passes to the branch of the varying pressure of the gas, beyond the valve which governs the aperture, as described; so that when the pressure becomes too great, the aperture shall be reduced, and vice versa. And I also claim, in combination with the above, making the disk so that it shall be also acted upon by the varying pressure in the branch, to assist in moving the valve to govern the aperture for the passage of the gas, substantially as specified, whereby the action of the instrument is rendered more sensitive and prompt as a governor.

WALTER KIDDER.

No. 245.—*Improvement in the process of Flouring.*

What I claim as my invention and improvement, and desire to secure by letters patent, is the process of grinding the offal of grain immediately after it has passed from the bolts, cotemporaneous with the first flouring; and by the continuous operation of machinery adapted to said process, substantially as set forth, for the purpose of increasing the quantity and improving the quality of the superfine or other flour.

DAVID P. BONNELL.

No. 246.—*Improvement in Composition for Stereotype Plates.*

What I claim as my invention, and desire to secure by letters patents, is, First, The mixture (herein described) of shellac, tar, and sand, as a substitute for type metal. Second, I claim the use of shellac as a basis to form a substitute for type metal, when it be mixed with the substances I have mentioned, or with other substances of a similar nature. Third, I claim also the use of clay, clay mixed with sand in various proportions, also with gum arabic, bees-wax, stearine, tallow, and oil, as before described, for the purpose of engraving or forming matrices or moulds, in which to make casts for typographical purposes, of the material and in the manner substantially as herein set forth. Fourth, I claim also the use of clay as a basis from which to form matrices or moulds as aforesaid, whether it be mixed with the materials I have mentioned, or whether other substances be used instead of them, but substantially of the same nature. Fifth, I claim, in combination with the employment of plastic material for stereotyping, the employment of the bearers in the manner described, for the purpose of obtaining casts, exactly level, and of type height.

JOSIAH WARREN.

No. 247.—*Improvement in Figure or Fancy Power-Looms.*

What I claim therein, is, First, The jacks with hooks or projections thereon, capable of being taken or passed by the lifter and depresser, as required, in combination with the harness or heddles, for the purpose of opening the shed. Second, The combination of the jacks, constructed and arranged substantially as described, with the lifter and depresser, as described. Third, The combination of the pattern-chain or cylinder with the jacks constructed in the manner described. Fourth, Arranging and connecting the lifter and depresser which operate the jacks, in such a manner that they shall operate simultaneously to elevate and depress the jacks and warps in forming the shed, substantially as described. Fifth, Giving motion to the pattern-chain or cylinder substantially as described. Sixth, The combination of the pattern-chain or cylinder with the jacks, lifter, and depresser as described. Seventh, So constructing or arranging the lifter and depresser, and the hooks or projections on the jacks, with reference to each other, substantially as set forth, as to bring the upper warps all into the same plane, and the lower warp all into another, when the shed is opened. Eighth, Connecting the hook-jacks to the bottom treadles or levers by inclined wires or their equivalents, to hold the jacks against the tubes or bars of the pattern-cylinder or chain, when not thrown out by the rollers, or other projections thereon.

WILLIAM CROMPTON.
MERRILL A. FURBUSH.
GEORGE CROMPTON.

No. 248.—*Improvement in Spark and Gas Consumers.*

What I claim, is the manner in which I have constructed and ar-

ranged the respective parts that constitute the inner and outer cases of the apparatus, which is placed at the top of the chimney. Also, I claim the manner of constructing and arranging the trumpet-mouthed tube D within the inner case, said tube being divided into two or more parts, and being made to deposit and discharge the larger portion of the sparks, by the aid of the opening between said parts as described, substantially as set forth. I also claim the manner in which I connect the apparatus at the top of the chimney with the furnace or fire-box, by means of the tube or pipes H, the cases L L, and the openings thence into the fire-box or furnace, for the purpose made known. I likewise claim the manner of preventing the entrance of water into the fire-chamber by the employment of the tubes M, in combination with the tubes H H′.

DAVID MATTHEW.

No. 249.—*Improvement in Planing Machines.*

First, What I claim, is the reciprocating beds, arranged with respect to the stationary beds substantially as described, in combination with the clamps or their equivalents attached to them; whereby the board is clamped between said movable beds and the clamps, and is free to move over the stationary planing-bed, and is fed, during the backward stroke of the planes, the whole length of said stroke. Second, I claim the within described method, or any substantially the same, of clamping and feeding lumber to knives or chisels.

ARETUS A. WILDER.

No. 250.—*Improvement in Oil Presses.*

I claim, First, The pipes sliding into and out of stuffing-boxes, in combination with the pressing-plates, for the purposes and in the manner set forth. Second, I claim, in combination with the pressing-plates, the complete boxes or cases, formed on the surface of the plates, as shown; where the openings to the said boxes or cases for the entrance or exit of the substance to be pressed, are closed with the doors and caps as set forth, the cap sliding over and thus securing the doors when the press is brought into action. This combination, when used in connection with a horizontal-press, enables me to communicate and press the substance, and discharge the refuse or cake, without the use of bags or mats, and without handling, and at the same time to secure a perfect and free discharge of oil from the entire surface of the cake, through the metallic filterers and vertical-channels.

D. L. LATOURETTE.

No. 251.—*Improvement in attaching Mineral Vitrifiable Matter to Metal.*

What is claimed, is attaching mineral vitrifiable matter to metal by inserting a metallic tubular shank involving the characteristics of thinness, yet stiffness enough to resist lateral strain, elasticity, and

centre vent into the mineral vitrified matter, as herein described; so that the quantity of metal, in proportion to the bulk of mineral admissible in the case, being thus very small, the vitrified mineral enjoys the capacity to embrace and attach itself to the metal without any strain in or upon itself during its crystallization, the difference between the expansibility and contractility of the metal and the mineral, the one to the other, being also reduced below any practically injurious degree, that is to say, the glass being just as strong with as without such a shank.

THOMAS G. CLINTON.

No. 252.—*Improvement in Utilizing Slags of Furnaces.*

What I claim is the process, substantially as described, of producing ware from the slag or scoria ejected from smelting furnaces for reducing iron, copper, zinc, and other metals by separating therefrom, and casting, moulding, blowing, or pressing the same in the heated state, as it comes from the smelting furnace, and then annealing, whether additional heat be applied or not, substantially as and for the purpose specified. And I also claim the method of obtaining slag or scoria from smelting furnaces in a vitrified state, fit for remelting, to be worked into ware, substantially as described, by casting it into thin sheets on to cold plates of metal, or other good conducting substances, as specified.

WILLIAM H. SMITH.

No. 253.—*Improvement in Looms for Weaving Figured Fabrics.*

What I claim is, First, The combination of the angularly moving catch-bars, operated substantially in the manner described, with the shifting-hooks hung on the jacks, so as to vibrate independently thereof, for the purpose of connecting and disconnecting the jacks with the said catch-bars. Second, The method substantially as described, of combining and arranging the parts for turning the figuring chain or cylinder in either direction.

C. W. BLANCHARD.

No. 254.—*Improvement in Stuffing-Boxes.*

What we claim, consists in combining with a stationary stuffing or packing box, a cup or ring, or its equivalent, through which the piston rod or shaft passes and works so fitted, substantially as described, that the end thereof shall make a close joint, by means of end pressure at the bottom of the stuffing or packing box, and be free to slide thereon laterally, to follow the vibrations of the piston rod or shaft, as set forth. And we also claim making the inner bore of the cup conical, in combination with the cut metallic rings fitted thereto, substantially as described, so that by the application of end pressure, the cut rings shall be forced into close contact with the periphery of the piston rod or shaft, and the end of the cup into close contact with the bottom of the box as described, and thus effectually prevent the escape of steam

or other fluid, and at the same time permit the required lateral play, as set forth.

THOS. W. ALLEN.
CHAS. W. NOYES.

No. 255.—*Improved Valves for Governors.*

What we claim is, the making the opening or openings, controlled by the governor valves of steam-engines, of gradually increasing capacity from the closed towards the open position, substantially in the manner and for the purpose specified. And we also claim interposing a spring between the valve cover and the set-screw, or its equivalent, which determines or sets the position of the face of the valve to its seat, so that the tension of the said spring shall resist the pressure of the steam on the valve cover, and thereby produce an increased flow of steam to the cylinders, substantially as specified. And we also claim the employment of the valve-lever, adjustable to the stem of the valve, in combination with a fixed indicator, substantially as specified, for the purpose of setting the valve in any required position, without opening the valve-box, as set forth.

JUNIUS JUDSON.
ALFRED JUDSON.

No. 256.—*Improvement in Portable Horse-Powers.*

What I claim is, such a wheel and axle, composed of a number of parts, arranged and connected substantially in the method herein described, so that the wheel can readily be taken apart and put together again, to facilitate the frequent removal of the horse-power from place to place, to bring it near the work on which it is to be used. I also claim connecting the segments of the rim of the horse-power by means of clamps, constructed as herein set forth.

JOHN A. TAPLIN.

No. 257.—*Improvement in Apparatus for opening Gates.*

What I claim is, First, Opening, closing, fastening, and unfastening the gate, by moving the bottom of the gate in an oblique direction, from and to the post upon which it is hung, as above specified. Second, I also claim the use of the pendulous and vertical levers *f f* and *i i*, and arms *g g* and *h h*, in combination with the hinges of the gate, the whole being operated and arranged substantially in the manner and for the purpose as above set forth.

SAMUEL G. DUGDALE.

LIST OF DESIGNS AND CLAIMS FOR 1853.

No. 540.—*Design for a Cooking Stove.*

We claim, and desire to secure by letters patent, the device, "Prairie Flower" on the front plate, the arrangement and configuration of the floral device ornamenting the side-door C, consisting of a full-blown central flower *e*, stems, foliage, and pendant flowers *g*, and the ornamental configuration of the smaller door D, as represented and described.

SHERMAN S. JEWETT.
FRANCIS H. ROOT.

No. 541.—*Design for a Wood Stove.*

We claim, and desire to secure by letters patent, the configuration and arrangement of the ornamental device on the side-plates of the stove, as represented and described. We also claim the ornamental design of the fire-door, as represented and described. We likewise claim the ornamental configuration of the bottom plate F, as described.

SHERMAN S. JEWETT.
FRANCIS H. ROOT.

No. 542.—*Design for a Cooking Stove.*

We claim, and desire to secure by letters patent, the configuration and arrangement of the ornamental design of the plate E, as described.

SHERMAN S. JEWETT.
FRANCIS H. ROOT.

No. 543.—*Design for a Cooking Stove.*

I claim the arrangement and combination of the represented ornaments, mouldings, panellings, and shapes in the above specified design for cooking stoves, substantially as shown.

JOSEPH G. LAMB.

No. 544.—*Design for a Cooking Stove.*

I claim the ornamental configuration or design, substantially as represented in the drawings and as described.

JOSEPH PRATT.

No. 545.—*Design for a Parlor Stove.*

I claim, and desire to secure by letters patent, the combination and arrangement of the ornamental forms and figures represented in the drawings, and forming together an ornamental design for a parlor stove.

JAMES A. CONKLIN.

No. 546.—*Design for a Sewing-Bird.*

I claim the design represented by the feathered bird on the wing, bearing a burden upon its back.

CHAS. WATERMAN.

No. 547.—*Design for a Cradle.*

I claim, and desire to secure by letters patent, the design and configuration of the ornaments described and set forth, forming together an ornamental design for a horological cradle.

ALEX. EDMONDS.

No. 548.—*Design for a Bust for Daniel Webster.*

I claim, and desire to secure by letters patent, the new design of a bust of Daniel Webster, of colossal size, as represented in the drawing.

T. BALL.

No. 549.—*Design for a Water-Cooler.*

We claim, and desire to secure by letters patent, the design and configuration of the ornamental water-cooler, described and set forth in the accompanying drawing.

EDWARD M. MANIGLE.
GEORGE PHIPPS.

No. 550.—*Design for a Clock-Case Front.*

I claim the design and configuration of the plate shown in the drawings, forming the front of a clock-case.

CHAS. CHINNOCK.

No. 551.—*Design for a Clock-Case Front.*

I claim, and desire to secure by letters patent, the design and configuration of the metal plate represented fully in the drawings, the same forming the front of a clock-case.

CHAS. CHINNOCK.

No. 552.—*Design for a Clock-Case Front.*

I claim the design and configuration of the plate as described and represented, forming the front of a clock-case.

CHAS. CHINNOCK.

No. 553.—*Design for a Cooking Stove.*

I claim, and desire to secure by letters patent, the combination and arrangement of the ornamental forms and figures, represented and forming together an ornamental design for a cooking stove.

JACOB BEESLEY.

No. 554.—*Design for a Cooking Stove.*

I claim, and desire to secure by letters patent, the configuration and arrangement of the ornaments in bas relief, on the front plates A and D, feed door B, curved surface E, doors C and F, panels G, and legs K and L, forming a new and original design for a cook stove, denominated the "Victor Complete."

S. H. SAILOR.

No. 555.—*Design for Girandoles, Candelabra, &c.*

I claim, and desire to secure by letters patent, the combination and arrangement of the ornaments as described and set forth, to form an ornamental design for girandoles, candelabra, &c.

ROBERT E. DEITZ.

No. 556.—*Design for Ladies' Hair Combs.*

I claim, and desire to secure by letters patent, the design and configuration of the series of loops forming the chains, as described and represented.

JEREMIAH HILLS.

No. 557.—*Design for a Portable Range.*

We claim, and desire to secure by letters patent, the design and configuration of the mouldings and ornamental work as described, forming an ornamental design for a portable range.

GARRETTSON SMITH.
HENRY BROWN.

No. 558.—*Design for a Cooking Stove.*

I claim, and desire to secure by letters patent, the configuration and arrangement of the ornaments in bas-relief, upon the doors A, B, C, and D, side-plates F, bed-plate K, back W, and feet P, as described, forming a new and original design for cook stoves, designated as "The Capitol."

S. H. SAILOR.

No. 559.—*Design for a Portable Range.*

I claim, and desire to secure by letters patent, the configuration and arrangement of the ornaments and mouldings upon the plate B, door A, and foot C, as set forth, forming a new and original design for the front of a portable range.

JOHN C. SMITH.

No. 560.—*Design for a Grate Frame.*

I claim, and desire to secure by letters patent, the combination and arrangement of the figures, flowers, and ornaments represented, the whole forming an ornamental design for a grate frame.

JAMES L. JACKSON.

No. 561.—*Design for a Grate Frame.*

I claim, and desire to secure by letters patent, the combination and arrangement of the figures, flowers, and ornaments represented, the whole forming an ornamental design for a grate frame.

JAMES L. JACKSON.

No. 562.—*Design for a Grate Frame.*

I claim, and desire to secure by letters patent, the combination and arrangement of the figures, flowers, and ornaments represented, the whole forming an ornamental design for a grate frame.

JAMES L. JACKSON.

No. 563.—*Design for a Grate Frame and Summer Piece.*

I claim, and desire to secure by letters patent, the combination and arrangement of the figures, flowers, and ornaments represented, the whole forming an ornamental design for a grate frame and summer piece.

JAMES L. JACKSON.

No. 564.—*Design for a Cooking Stove.*

I claim, and desire to secure by letters patent, the configuration and arrangement of the ornaments in bas-relief, and mouldings on the front-plate P, side-plates H, back-plate X, base-plate V, oven-doors A and D, door and panel F, feed-doors K, draft-doors M, and feet P′, as set forth and described, forming a new and ornamental design for the cook stove designated as the "New World."

S. H. SAILOR.

No. 565.—*Design for a Cooking Stove.*

I claim, and desire to secure by letters patent, the configuration and arrangement of the ornaments in bas-relief, and mouldings on the doors A, E, and F, plates C and S, and feet U and V, as set forth and

described, forming the ornamental design of the cook stove designated as the "Enchantress."

JULIUS HOLZER.

No. 566.—*Design for a Cooking Stove.*

I claim the ornamental configuration or design as exhibited in the drawings.

E. F. ROBINSON.

No. 567.—*Design for a Parlor Stove.*

I claim, and desire to secure by letters patent, the combination of mouldings and ornaments, as arranged in the parlor stove D, the whole forming an ornamental design.

SAMUEL D. VOSE.

No. 568.—*Design for a Cooking Stove.*

We claim, and desire to secure by letters patent, the design and configuration of the ornaments for a cooking stove, as described and shown in the drawings.

ANTHONY J. GALLAGHER.
JOHN J. BAKER.

No. 569.—*Design for a Jamb or Side-Plate for a Cook-Stove.*

What I claim, and desire to secure by letters patent, is the ornamental design and configuration of jamb-plate for a cook-stove, such as herein described and represented in the annexed drawing.

JOHN T. DAVY.

No. 570.—*Design for a Stove-Plate.*

What I claim, and desire to secure by letters patent, is the ornamental design of a stove-plate, substantially as described.

JOHN SABEY, JR.

No. 571.—*Design in Cook-Stoves.*

What I claim, and desire to secure by letters patent, is the ornamental design in bas-relief upon the doors B C D and F, and plates A P K and R, of the configuration and arrangement set forth.

EVERARD BOLTON.

No. 572.—*Design of Elevated Oven and Cook-Stove.*

What I claim, and desire to secure by letters patent, is the ornamental design and configuration of cook-stove plates, as described.

N. S. VEDDER.

No. 573.—*Design for a Cooking Stove.*

What I claim, and desire to secure by letters patent, is the combination of mouldings and ornaments as arranged in the cooking stove A, the whole forming an ornamental design.

SAML. D. VOSE.

No. 574.—*Design for a Cooking Stove.*

What I claim, and desire to secure by letters patent, is the combination of mouldings and ornaments as arranged in the cooking stove B the whole forming an ornamental design.

SAML. D. VOSE.

No. 575.—*Design for a Cooking Stove.*

What I claim, and desire to secure by letters patent, is the combination of mouldings and ornaments as arranged in the cooking stove C, the whole forming an ornamental design.

SAML. D. VOSE.

No. 576.—*Design for a Parlor Stove.*

What I claim, and desire to secure by letters patent, is the combination of mouldings and ornaments as arranged on the parlor stove E, the whole forming an ornamental design.

SAML. D. VOSE.

No. 577.—*Design for a Register Face.*

What I claim, and desire to secure by letters patent, is the new and original design for a register face, formed by the peculiar arrangement of the metallic bars, as shown in the drawing.

JAMES COWLES.

No. 578.—*Design for the Half-Plate of a Waffle-Baker.*

I claim the design for the waffle plate or mould, substantially as exhibited.

NATHL. WATERMAN.

No. 579.—*Design of Cook-Stove.*

What we claim, and desire to secure by letters patent, is the ornamental design and configuration of cook-stove plates, as described.

JAMES J. DULLEY,
SAMUEL PIERCE.

No. 580.—*Design for a Cooking Stove.*

What I claim, and desire to have secured to me by letters patent, is the new design consisting of the flower work and ornamental figures,

composed of the raised leaves and spear heads as described, for the front, side, and back plates of a cooking stove.

JOHN MASON.

No. 581.—*Design of Cook-Stove.*

What I claim, and desire to secure by letters patent, is the ornamental design and configuration of cook-stove, as described.

JAMES J. DUILEY.

No. 582.—*Design for a Lady's Sewing-Bird.*

What I claim, and desire to secure by letters patent, is the design and configuration of the sewing-bird at rest, as described.

JULIUS E. MERRIMAN.

No. 583.—*Design for the Plates of a Parlor Stove.*

What I claim, and desire to secure by letters patent, is the combination and arrangement of the ornamental forms and figures represented in the drawing, forming together an ornamental design.

ELIHU SMITH.

No. 584.—*Design for a Stove.*

What I claim, and desire to have secured by letters patent, is the combination and arrangement of the ornamental forms and configurations, forming an ornamental design for a stove as described.

HOSEA H. HUNTLEY.

No. 585.—*Design for a Cooking Stove.*

What I claim, and desire to have secured by letters patent, is the combination and arrangement of the ornamental forms and configurations of a cooking stove, forming an ornamental design as described.

HOSEA H. HUNTLEY.

No. 586.—*Design for a Cooking Stove.*

What I claim, and desire to secure by letters patent, is the design and configuration of the mouldings and ornamental work, as described.

THOMAS BARRY.

No. 587.—*Design for a Cooking Range.*

What I claim, and desire to secure by letters patent, is the design and configuration of the moulding and ornamental work, as described.

REUBEN H. N. BATES.

No. 588.—*Design for a Cooking Stove.*

What I claim, and desire to secure by letters patent, is the design and configuration of the ornaments and mouldings described.

JULIUS HOLZER.

No. 589.—*Design for a Sewing-Bird.*

What we claim, and desire to secure by letters patent, is the design of an entire bird in a sitting posture, constituting an ornamental design for a sewing-bird.

ALLEN GEROULD,
JOHN H. WARD.

No. 590.—*Design for a Statuette of Daniel Webster.*

What I claim, is the new design for a statuette of Daniel Webster, as described.

THOMAS BALL.

No. 591.—*Design for a Cooking Stove.*

What I claim, and desire to secure by letters patent, is the design and configuration of the ornaments for a cooking stove.

JOHN W. VAN CLEVE.

No. 592.—*Design in Stoves.*

What I claim, and desire to secure by letters patent, is the configuration and arrangement of the ornaments in bas-relief and mouldings on the plates A B C D and E, and door F, forming a new and ornamental design for a stove, called the "Seven-Plate Stove."

S. H. SAILOR.

No. 593.—*Design for a Cast-Iron Frame for a Milk Stool.*

What I claim, and desire to secure by letters patent, is the ornamental design and configuration of a milk stool, as described.

P. A. PALMER.

No. 594.—*Design in Cook-Stoves.*

What I claim, and desire to secure by letters patent, is the configuration and arrangement of the ornaments, in bas-relief and mouldings, on the plates A H X, doors B and C, oven door I, and foot B′, as described, forming a new and original design in cook-stoves.

FREDERICK SHULTZ.

No. 595.—*Design in Stoves.*

What we claim, and desire to secure by letters patent, is the configuration and arrangement of the mouldings and ornaments on the front, top, and base of the stove, together with the form and configuration of ornaments on the front and urn, forming a new and original design.

GARRETTSON SMITH,
HENRY BROWN.

No. 596.—*Design for Stoves.*

What I claim, and desire to secure by letters patent, is the raised shield B *a*, the raised shield B′ *i*, the lance border A *b c*, the scrolls *d e*, and the borders *f g h*, forming an ornamental design for a stove.

S. W. GIBBS.

No. 597.—*Design in Stoves.*

What I claim, and desire to secure by letters patent, is the design, configuration, and arrangement of the mouldings, panels, and ornaments on the front, back, and side plates of the stove.

W. P. GRAY.

No. 598.—*Design for Bedsteads.*

What I claim, and desire to secure by letters patent, is the design, configuration, and arrangement of the several ornaments and mouldings on the posts, rails, head, foot, and side-boards and cornice, as fully set forth, forming a new and original design for bedsteads.

JOHN H. BARTH.

No. 599.—*Design for Stoves.*

What I claim, and desire to secure by letters patent, is the use of the ornaments and null mouldings described.

JULIUS HOLZER.

No. 600.—*Design for Stoves.*

What I claim, and desire to secure by letters patent, is the design and configuration of the ornamental screen and standards, and the combination of the same with the ornamental base and the cylinder, as described.

GEO. H. TRYDAY.

No. 601.—*Design for Stoves.*

We claim as our invention, and desire to secure by letters patent, the design and configuration of the mouldings and ornamental work, as described.

GARRETTSON SMITH,
HENRY BROWN.

No. 602.—*Design for a Cooking Stove.*

What I claim, and desire to have secured by letters patent, is the combination and arrangement of the ornamental forms and configurations of a cooking stove, as represented and described.

HOSEA H. HUNTLEY

No. 603.—*Design in Stoves.*

We claim, and desire to secure by letters patent, the design, configuration, and arrangement of the ornaments in bas-relief and mouldings, forming a new and original design.

GARRETTSON SMITH,
HENRY BROWN.

No. 604.—*Design for Metallic Coffins.*

What I claim, and desire to secure by letters patent, is the design of the shape and configuration of the coffin, as described.

THEODORE J. GILLIES.

No. 605.—*Design for a Cooking Stove.*

What I claim, is the general ornamental design of the stove, as shown in the side and front plates *c d* and L, including the legs: and separately I claim the ornamental design of the oven door E, that of each of the front doors A B, that of the doors C, that of the door F, and that of the panel B.

N. P. RICHARDSON.

No. 606.—*Design for Furnace Register.*

What I claim, and desire to secure by letters patent, is the design, configuration, and arrangement of the ornaments in bas-relief, on the slide *a* and plate *b*.

JOSEPH A. READ.

No. 607.—*Design for a Parlor Stove.*

I not only claim the ornamental design of the blower, but that of the fire-place front.

WINSLOW AMES.

No. 608.—*Design of Parlor Stove.*

What we claim, and desire to secure by letters patent, is the ornamental design and configuration of parlor-stove plates, as described.

EZRA RIPLEY,
N. S. VEDDER.

No. 609.—*Design of Cook-Stove.*

What I claim, and desire to secure by letters patent, is the ornamental design and configuration of cook-stove plates, as described.

N. S. VEDDER.

No. 610.—*Design for an Instrument for holding Ladies' Sewing Work.*

What I claim, and desire to secure by letters patent, is the device

or design of a butterfly bending over a flower, when adapted and arranged for an instrument for holding sewing or other like work.

JOHN LANE.

No. 611.—*Design for Elevated Oven Cooking Stoves.*

I disclaim all other or further claim in the premises, beyond the design set forth.

S. F. MOORE.

No. 612.—*Design for a Cooking Stove.*

I claim the ornamental design of the side-plate of the body of the stove, and of each of the larger and smaller doors of either the front or side plates.

WINSLOW AMES.

No. 613.—*Design of Parlor Stove.*

We claim, and desire to secure by ietters patent, the ornamental design and configuration of parlor-stove plates, as described.

JAMES WAGER,
VOLNEY RICHMOND,
HARVEY SMITH.

No. 614.—*Design for a Cylinder Coal-Stove.*

We claim, and desire to secure by letters patent, the design and configuration of the plates, as described.

JAMES WAGER,
VOLNEY RICHMOND,
HARVEY SMITH.

No. 615.—*Design for a Hall Stove.*

I claim, and desire to secure by letters patent, the ornamental design or pattern for a stove, substantially as described.

WILLIAM RESOR.

No. 616.—*Design for a Frame for a Foot-Stool.*

What I claim, and desire to secure by letters patent, is the new design for the frame of a foot-stool or ottoman, consisting in the ornamental figures set forth.

CHARLES ZEUNER.

No. 617.—*Design for a Frame for a Foot-Stool.*

What I claim, and desire to secure by letters patent, is the new design for the frame for the foot stool or ottoman, consisting in the ornamental figures set forth.

CHARLES ZEUNER.

No. 618.—*Design for a Laundry Stove.*

I claim, and desire to secure by letters patent, the described ornamental pattern or design for a laundry stove.

WM. RESOR.

No. 619.—*Design for Dining-Room Stoves.*

We claim, and desire to secure by letters patent, the figures, scrolls, and mouldings, forming an ornamental design for dining-room stoves.

CONRAD HARRIS,
PAUL W. ZOINER.

No. 620.—*Design for Coal Cooking-Stoves.*

We claim, and desire to secure by letters patent, the ornamental design for a stove, as described.

CONRAD HARRIS,
PAUL W. ZOINER.

No. 621.—*Design for a Stand for Shovel and Tongs.*

What I claim, and desire to secure by letters patent, is the new design for a stand for shovel and tongs, consisting in the ornamental figures set forth.

CHARLES ZEUNER.

No. 622.—*Design for a Stand for Shovel and Tongs.*

What I claim, and desire to secure by letters patent, is the new design for a pair of shovel and tongs' stands, consisting in the ornamental figures set forth.

CHARLES ZEUNER.

No. 623.—*Design for Cannon Stove.*

I claim the ornamental design or pattern for a stove, substantially as described.

WM. RESOR.

No. 624.—*Design for Cooking Stove.*

We claim, and desire to secure by letters patent, the ornamental design for a stove, as represented in the drawings.

CONRAD HARRIS,
PAUL W. ZOINER.

No. 625.—*Design for Cooking Stoves.*

I claim, and desire to secure by letters patent, the ornamental design for a stove, as represented in the drawings.

PETER SEIBERT.

ADDITIONAL IMPROVEMENTS.

No. 104, to original Letters Patent, No. 5438.—*For improvement in Organ Pianos.*

What I claim as my invention, and desire to secure by letters patent, is the application to an organ piano of a series of strings upon a frame, or both sides of a sounding-board, which shall produce a diminuendo > termination, and add volume, power, or purity to the tones made, as herein described, or in any other mode substantially the same, for the purposes set forth.

RUFUS NUTTING, 2d.

No. 105, to original Letters Patent, No. 5630.—*For improvement in Machines for separating Straw from Grain.*

Having thus fully set forth, in addition to the original *patented* specification, the importance and utility of my said additional improvements, and having referred thereto by diagrams, explanations, and letters of indication, what I designate as new and original with myself, and desire to secure by letters patent of the United States, is as follows:

First, I claim the peculiar construction of the rotary apparatus formed of concavo-convex aprons or shields *a b c d*, combined with the curved prongs *e f g h*, the said rotary apparatus, fig. 5, used in combination with the threshing-cylinder H, fig. 1, specifically as set forth.

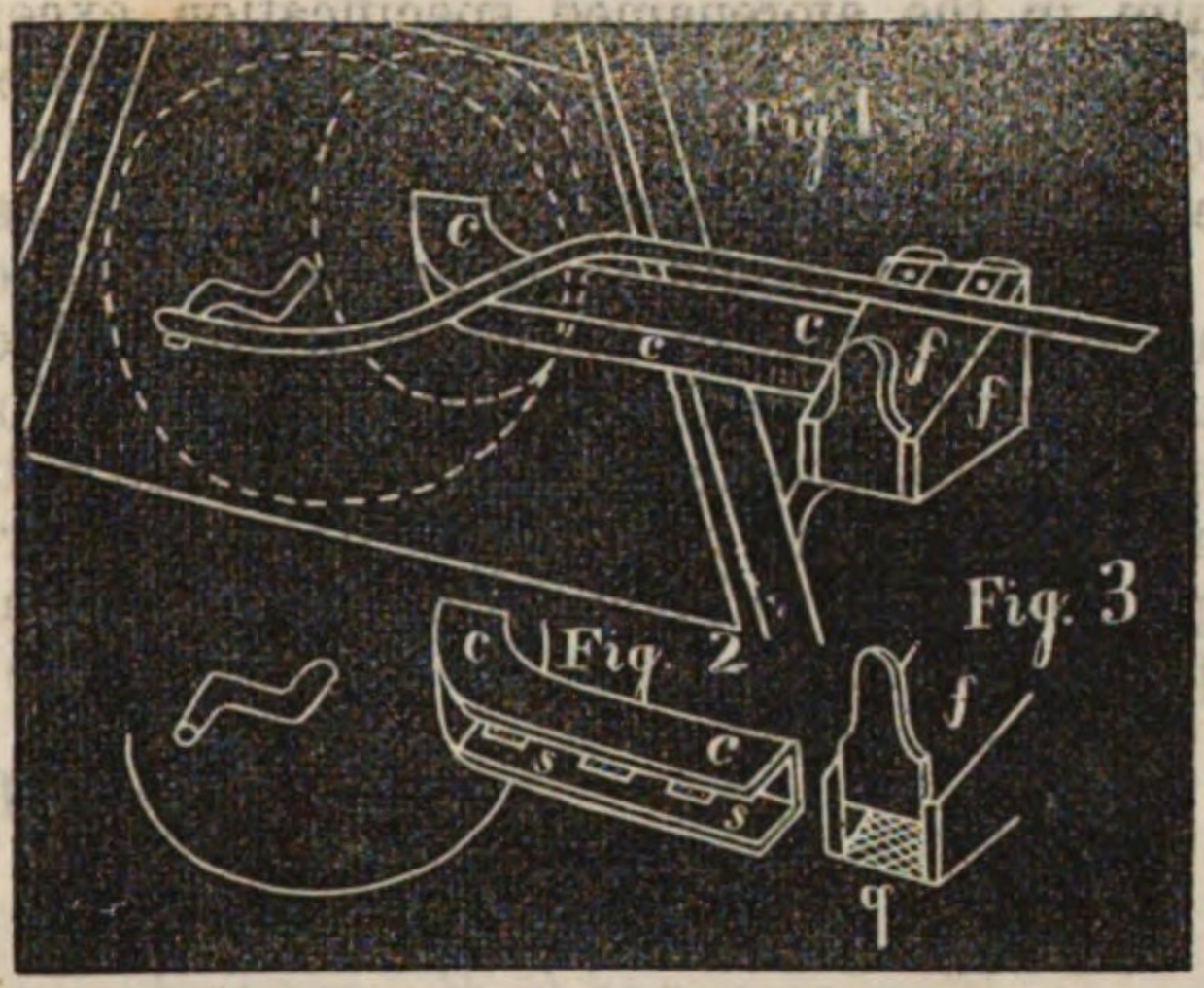
Second, I claim setting the spout E at about an angle of 45 degrees with the horizon, and adding the escape-pipe B, to prevent the grain from flying about.

ELISHA S. SNYDER.

No. 106, additional to original, No. 9579.—*For improvement in Winnowers and Threshers.*

I claim the constructing of the suction pipe or tube *c c c*, of any desired form, with a sliding hinged flap-bottom *s s s*, fig. 2, attaching said tube to the side of the thresher or winnower, in any position, and also attaching said pipe or tube to the grain discharge or bagging-spout *f f*, having a sieve-like or reticulated bottom *q q q q q*, fig. 3, and using said attachment in combination, for the purpose of cleaning and chaffing or double winnowing grain of all kinds, with a blowing blast of air, and a suction draught or current of wind, also in combina-

tion and in one operation, and at the same time for the purpose specifically, as hereinbefore fully set forth.



I do not, however, claim inventing or originating the double cleaning of grain, but simply the peculiar combination above mentioned.

GEO. F. S. ZIMMERMAN.

DISCLAIMERS.

For improvement in making Lamp-Black.

Your petitioner, therefore, enters his disclaimer to so much of said claim as includes the process of burning lamp-black in a confined building, when such process is not carried on by the arrangement and combination of furnace and confined room, substantially as described in said letters patent.

R. S. CHILD.

For improvement in Spark-Arresters.

Your petitioners, therefore, enter their disclaimer to so much of the said claim as includes the separation of sparks by means of centrifugal force, or by means of tangential shutes, when such separation is not effected by means of the combined operation of a central chamber, a series of central tangential openings, and a larger circular chamber furnished with a series of openings J J into exterior chambers, said openings being so arranged as to extend throughout or nearly throughout the vertical extent of the walls of such larger chamber.

E. R. BENNET.
JAMES RADLEY.
J. W. HUNTER.

For Machinery for making Mouldings.

Your petitioner, therefore, hereby enters his disclaimer to all that part of the claim in the aforenamed specification, excepting to the combination of the rollers or rings, so constructed as to be adjustable and adapted to varying irregular forms of material to be operated upon, after the same has been sawed or cut as nearly as practicable to the general form of the moulding to be made, so as to act only or most strongly upon those parts of the material from which most is to be taken off, substantially as in the specification is described, with one or more cutters or planes, whether rotating or stationary, for giving the proper form or dressing to the moulding as described, for the purpose of economizing the material and facilitating the operation; which disclaimer is to operate to the extent of the interest in the said letters patent vested in your petitioner.

JOHN LAWRENCE.

For improvement in Fire-arms, and in the apparatus used therewith.

Your petitioner, therefore, hereby enters his disclaimer to that part of the claim in the before-mentioned specification which is in the following words, viz.: "I claim making the aperture through the tubes or nipples (which receive the percussion caps) conical or funnel-shaped, for the purpose of freely admitting the fire from the percussion cap, and concentrating it as it enters the chamber,"—which disclaimer is to operate to the extent of the interest in said letters patent vested in your petitioner.

SAM. COLT.

For alleged improvements in Seal-Presses and Metallic Boxes.

Your petitioner, in conjunction with Platt Evens, Jr., made application for letters patent for certain alleged improvements in seal-presses and metallic boxes or bushing therefor, and that so much of said improvements as entitled your petitioner to be a joint inventor with said Evens, has been excluded from the claims under said application, and make no part of the subject of letters patent granted upon the same on the 28th day of June, 1853, whereby your petitioner, having no right or title to be considered joint inventor or joint patentee with said Evens, hereby disclaims all right, title, and interest in said invention or improvement and patent as joint inventor or patentee, and prays that this disclaimer may be entered of record in the Patent Office.

JAMES FOSTER, JR.

EXTENSIONS.

Improvement in Excavators.

What I claim is the application of power to force the scraper forward against a bank in the act of excavating, and to withdraw it at pleasure, by the aid of a barrel, chains, and other apparatus, constructed and operating substantially in the manner herein described, by which its sudden recoil will be prevented when it encounters any unusual resistance; and this I claim, whether the apparatus be arranged exactly in the manner set forth, or in any analogous way by which the same result will be attained. I claim also the general combination of the friction belt around the pulley upon the shaft K, and the apparatus for tightening the same, or of allowing it to run loose, for the purpose and in the manner described.

WM. S. OTIS.

Improvements in Steam-Boilers and Steamboats.

I claim as my invention, and a re to secure by letters patent, the manner in which I have combined and connected the common safety-valve with the apparatus which is to operate by the melting of the fusible alloy, this apparatus being constructed and operating substantially in the manner set forth; by which arrangement the safety-valve is left free to be opened by the pressure of steam, in the ordinary way, whilst it will also be opened by the safety apparatus from the influence of temperature alone, independent of pressure from the elasticity of the steam.

I lay no claim to the use of the fusible alloy to allow the escape of steam, but only to the combination in which I have used it as set forth.

Second, I claim the manner in which I have combined the float with the valves, which it is intended to open in the outside boilers of any series, so as to cause a horn to sound on one side, and a whistle on the other, or by its escape to produce two different distinctive and characteristic sounds, which shall give information when the water has descended on either side to a point as low as it can be safely allowed to descend.

I do not claim the causing of a horn, whistle, or other instrument to sound from the escape of steam, but only the combination and arrangement of the parts as described, so as to afford the desired information in the manner set forth.

I claim the manner in which I have arranged the water-level or level whose indications are governed by any other fluid adapted to the purpose, by which arrangement and combination as set forth, that is to say, the water-level resting on the boilers independently of the woodwork of the boat, and extending up into the cabin, where it is made to show the level of the water in the boiler by the co-operation of the apparatus last described, namely, the apparatus for sounding a horn or a whistle, and affording by their conjoint action a knowledge of the height of water in the boilers respectively.

I do not claim the water-level alone, but only as arranged and combined by me, as described.

I claim the particular apparatus for extinguishing the fire as herein set forth, operating by means of the fusible alloy apparatus, substantially as described.

And, lastly, I claim the arrangement and application of the apparatus for preventing the careening of a steamboat at a wharf, pier, landing, or other stopping-places. I do not claim the giving motion to a vertical timber or to a sliding apparatus by means of a rack and pinion gearing, this being a well-known device, but confine my claim in this particular case to the combining and employing of this apparatus with a steamboat, by which a new and important result is attained.

CADWALLADER EVANS.

Improvement in the Mode of supplying Heated Air to Furnaces.

What I claim as my invention, and desire to secure by letters patent, is the employment of a box or receptacle constructed in the manner set forth, and which is to contain a stratum of pebble stones, or of any other material which will leave interstices through which air may be forced to pass, but which will have the effect of producing pressure within the furnace, supplied with air from any suitable blowing apparatus; and in which furnace the air is to be forced into a closed ash-pit, the whole being combined and arranged substantially in the manner set forth. I also claim the mode described of forcing in with the atmospheric air a portion of that which has previously passed through the fire, by which means it is made to enter in consequence of the pressure to which it is subjected. I claim likewise the manner of shutting off the draft from the blowing apparatus by the opening of the door for feeding the fire, as set forth.

F. P. DIMPFEL.

Improvement in Cooking Stoves.

What I claim as my invention, and for which I desire to secure letters patent, is the extending of the oven under the apron or open hearth of the stove, and the combination thereof with the flues constructed as above specified, by which means I am enabled to obtain greater room for baking and other cooking purposes, and effect a greater saving of expense and fuel than in cooking stoves of the ordinary construction.

DARIUS BUCK.

Improvement on Ships' Galleys for Distilling Fresh Water from Salt Water.

What I claim as my invention, and desire to secure by letters patent, is the generator of the peculiar form specified, in combination with a ship's galley, and also the constructing of a generator for distilling purposes, by making the sides of the galley double, so as to form a vessel for containing the salt water to be distilled.

ENOCH HUTCHINSON.

Improved mode of constructing Rake Teeth.

What I claim as my invention, and desire to secure by letters patent, is obtaining this elasticity more effectually for the use designated, by coiling the wire of which the teeth are made around the head of the rake, in the manner and for the purpose described.

HEZEKIAH HAYNES.

Improvement in the mode of making Boxes for Axles and Gudgeons.

What I claim as my invention, and desire to secure by letters patent, is the making of the boxes for axles and gudgeons, by the casting of hard pewter or composition metal of which tin is the basis into said boxes, they being first prepared and provided, or not, with rims or ledges, and coated with tin.

ISAAC BABBITT.

Improvement in Smut Machines.

What I claim as my invention, and wish to secure by letters patent, is the combination of the beaters with the fans, graters, and heads, constructed and operating as described.

LEONARD SMITH.

Improvement in the construction of Furnaces for Smelting Iron Ore.

What I claim as my invention, and desire to secure by letters patent, is, First, The arrangement of the fire-chambers or boshes opening into one horizontal flue above, in combination with the boiler for generating steam, and the pipes I I for heating the blast placed in said flue, the whole being constructed and operating as described. Second, The method of constructing the fire-chambers by contracting them at the centre, and forming two boshes in each chamber, for causing the charge to descend gradually, so as not to obstruct the draft and prevent the ascent of the lighter substances, as before described.

AUGUST ROTH.

Improvement in the construction of Wooden or Frame Bridges.

What I claim as new, and desire to secure by letters patent, is,

First, The forming of the truss-frames of bridges by connecting and combining the string-pieces, posts, main and counter braces, and arch braces by the aid of gibs and keys, constructed as set forth, using therewith such bolts or treenails as I may deem proper.

Second, I claim the employment or use of the gibs and keys formed in the manner set forth, and passing through the string pieces and into the posts near their ends, for the purpose of trussing and straining the frame generally.

Third, I claim the manner of arranging the arch braces, so as to diminish or increase the camber of the truss-frames, by the employment of gibs and keys passing through those portions thereof which constitute the lower parts of said arch braces.

Fourth, I claim the construction and employment of a bearing or step of cast-iron, furnished with lugs or tuscums which are let into corresponding notches in the head and foot of the main braces and the posts, in the manner and for the purpose set forth.

STEPHEN H. LONG.

Improvement in the construction of Fan Blowers.

What I claim as my invention, and desire to secure by letters patent, is inclosing the vanes of the wind-wheel with circular sides or rims, between which and the outer case there is a space *i i* left, as described, and attaching a collar to said sides or rims, to admit air to the revolving vanes as shown at *d d*, said collars being made to run air-tight in the manner set forth, to prevent the escape of air from the space *i i*, the whole being constructed and arranged substantially in the manner set forth.

FR. P. DIMPFEL.

Improvement in the mode of constructing Sockets for holding Tools.

What I claim as my invention, is making the gripe with one end conical, and fitted to the outer end of the socket, and the other end provided with a screw fitted to a female screw in the other end of the socket secured in the handle, in the manner and for the purpose described; and this I claim, whether the gripe be made in two or more pieces, or in one piece and slit, all as described.

HERRICK AIKEN.

BSB Bayerische StaatsBibliothek
MDZ Münchener DigitalisierungsZentrum Digitale Bibliothek

House documents

Bd.: [77.] 1853, P. 1 = Doc. Nr. 39 = Congress 33, Sess. 1

Washington, DC 1853
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